

the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

EST. 1906

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Editorial Comment

Re-employment of Disabled Veterans

The approaching final breakthrough which will result in an early end to heavy fighting in Europe, and the spectacularly successful victory of our Navy against the Jap fleet, and our re-entry into the Philippines under the leadership of General MacArthur, fill us all with a feeling of anticipation for the final shot, when peace may again be the lot of all of us. We all hope that day may not be too far distant.

But, whether the time is to be long or short, there has already been heavy fighting, and there will be a lot more to come, and this means disabled, handicapped men. Naturally, a grateful Government will see to their care, but care is not enough. They are entitled to the self respect accompanying productive work. The Government is not alone in owing these men a debt, so do we. It is now our job to see that they are permitted to enjoy, in some measure, the privileges for which they so ably fought.

There is nothing new about the employment of disabled men. Some of the larger corporations have been doing it for as long as twenty years. These corporations have, in some cases, set up elaborate systems of study of the problem of employing handicapped men. The important contribution which they have to offer is the proof that the system works, and is not difficult.

What the large corporations are doing, and have done is not enough. They might be compared, in this instance, to the income taxpayers in the top brackets. The figures look impressive, but when we look at the total income from this source they aren't a drop in the bucket. It is the white collar worker, and the lower middle income group who really swell the volume. And so it is in the case of placing disabled veterans. Everyone, large and small, should see to it that they cooperate in this important endeavor.

Handicapped workers have given a splendid account of themselves in the past. Help them, and help yourself.



The iodine in this Kimble "crush" ampul can be applied quickly and easily to wounds. These ampuls are but one of the many types of essential Kimble Glass Containers. ★ Life-saving and pain-relieving materials could never be effective without the containers that carry them to the point where they go into action.

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desiderata

Comment on interesting new chemical developments
and their application to cosmetics and toiletries

by MAISON G. deNAVARRE

MUSKRAT MUSK

It is a privilege to describe to you a remarkable American chemical development in the field of perfumery, namely, the production of a highly purified and concentrated musk-like substance extracted from the sex glands of the American muskrat. The material is a semi-solid mass of crystals, water-white in color, freely soluble in alcohol.

Its use in fine perfumes and toilet waters is automatically indicated. The odor is somewhat different than either natural musk, synthetic musks of the Bauer type or the newer long chain cyclic compounds. The odor is rich and full. It is an unique fixative. The animal character is readily apparent but not objectionably strong as in the case of some animal extracts. It will find use in all quality face powders, talcums and sachets as well as in colognes and extracts.

The combined research of chemist and manufacturer gave birth to this truly outstanding discovery. Both are to be congratulated for it.

PRESERVATIVE

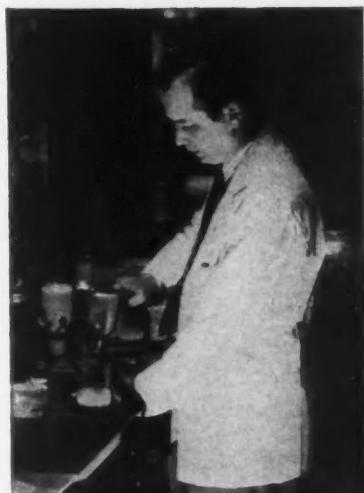
In discussing preservatives with people, the commonest remark is that "we have been making this cream for 15 years or more and it has never spoiled." Brother, you are more lucky than wise. Only the other day I opened several jars of different creams in a drug store and found two of them mouldy. Both were of quite high water content. Both products are old-timers and so I suppose they are either one of the group mentioned above or they have used one or the other, an insufficient amount or the wrong preservative.

Ask anyone who has had mold troubles and they will tell you of the

grief it can bring down upon you. And it is so cheap to insure against it. Speaking of preservatives, brings to mind the fact that in some products as little as 15 per cent of propylene glycol will endow preservative properties to some products. But don't take this as gospel fact. Test it out in your product before taking chances. Sometimes the propylene glycol can act as solvent for whatever other preservative you may be using. Important to remember is to get the preservative in the aqueous phase, because that is where the mold or yeast will have to grow. The more you can do to keep it in the water, the better the results. It is known in actual practice that some preservatives have a higher fat than water solubility. Under certain conditions, the preservative seems to leave the water phase and go into the fats. When this happens, you can expect as much trouble as if there were no preservative present because of the poor inhibiting properties of fat solutions of the common preservatives used in cosmetics. Propylene glycol is one method of insuring the presence of preservative where it should be, at least in part. If enough propylene glycol is used, it will act as a secondary preservative besides endowing the cosmetic with some anti-freeze properties and cosmetic emollient effect.

COLD WAVE SHAMPOO

The boloney that has been making the rounds among beauty supply houses, aided and abetted by their principals, the manufacturers, regarding the type of shampoo to use before cold waving, absolutely stinks. In one case it was said that an alkaline shampoo was best. Later the



M. G. DeNavarre at work in his laboratory

same man said that an acid shampoo was best. Still later he said that a nearly neutral shampoo gave most success. A quick test of this *nearly neutral* shampoo showed a pH of around 4.5 or so. Somebody doesn't care how they distort the truth, do they?

From a knowledge of the true facts, any shampoo that can remove the dirt, fats (natural and others) and insoluble hard water deposits from the hair during shampooing is all right. The pH of such shampoo will usually range anywhere from about 4.5 to around 8.5, depending on the formulation. The important thing is to leave the hair shaft clean so the cold waving solution can penetrate into it. If the shampoo is correctly given, there will be little change of the pH of hair because of its high buffering power for acid and alkali. By the time the wave is given, the hair pH is probably back to normal. Shampoos based on synthetic detergents, sometimes called wetting agents or sulfonated oils, are usually more acid in character than shampoo based on even the most neutral soap, for self evident reasons. In fact, it can be reasoned that a shampoo of pH 7.0 to 8.5 would be more desirable than an acid shampoo, since the cold waving solution has a pH of 9.5 or thereabouts.

The important thing is to remove the dirt, fats and insoluble hard water deposits to allow the cold wave solution to penetrate the hair shaft uniformly. Any shampoo that does that is good for cold waving.



American infantry unit carrying full equipment, including machine gun, on Normandy Beachhead. Signal Corps Photo.

EQUIPPED TO WIN!



Months of preparation and planning must back up *any* battle campaign. The success or failure of an engagement often depends upon the quality and character of the supplies that equip our boys to win.

That's true of any campaign—battles overseas or sales battles here. Plan now for the *sales* campaigns coming soon. Equip your products to win . . . be ready with Sheffield Process Tubes—the toughest, strongest tubes ever made! Let us tell you, now, about *Sheffalloy* and our exclusive *Sheffield Process* of melting, mixing, tempering metals to give a finished tube of surpassing strength and pliability. Write or phone us, now.

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THE WILCO COMPANY, 6800 MCKINLEY AVE., LOS ANGELES 1

Available as a paste, a new wetting agent with excellent foaming properties is now available in drum lots and more. It is one of the alcohol sulfate types, free from inorganic salts. It is soluble in water, but water shampoos will require substantial quantities of solubilizers to produce a product that does not throw out on cooling.

QUINCE SEEDS

If you are one of the people who are having trouble in getting a good quality of quince seeds, you should try a mucilage of methyl cellulose. It does not quite have the glair or stringiness of quince mucilage, but it can give some pretty faithful duplications when worked into a finished product. Another interesting replacement is Irish Moss mucilage, now available in highly concentrated form so that all you have to do is to disperse the powder in water and presto you have a mucilage. In either case, it is desirable to make up a quantity of the mucilage in advance, allow to settle out, and use the clear portion. The balance may be passed through a filter press and also used, but you can save a lot of time by siphoning off the clear portion first. While methyl cellulose is not supposed to need a preservative, the Irish Moss mucilage does.

HAIR RINSE

Available as a dry powder, sodium diacetate so-called, is freely soluble in water, contains some 30 per cent of free acetic acid and hence may be used as a hair rinse. Suitably colored and perfumed, the material needs nothing else to be effective.

COSMETIC CONTACT COMMITTEE

Why not a cosmetic contact committee? A Pharmaceutical Contact Committee works exceedingly well, consisting of a mixed group of technicians of two trade associations and other technicians.

Such a cosmetic contact committee could consist of several members of each of the trade associations, technical staff of the trade press, non-members of trade associations, governmental agencies and one or two leading educators. A combined committee of this type could do much to eradicate unjust claims on products, unfair interpretations by governmental agencies, use of undesirable in-

gredients or the manufacture of potentially dangerous products. This should be a group of technicians not management. Periodic meetings could be had without much expense. Most of the business between members would undoubtedly be done by letter.

Maybe I haven't got the idea exactly straight in the above outline,

but the basis for good is present. Important in the organization of this technical group is to make it truly representative of the industry. It should not be dominated by either of the several factions, such as cosmetic maker, supplier of raw material, press, government or educator—all present on an equal footing.

Questions and Answers

523. INSECT REPELLENT

Q: In reply No. 497, you mention an insect repellent now unavailable. We would appreciate the name of this compound and the supplier's name. We understand that one of the phthalates is often used. We would appreciate your opinion as to their efficacy.

B. B.—MONTANA

A: The particular compound referred to in reply No. 497 is abbreviated B. M. O. O. The name of the supplier is sent to you under separate cover. The phthalates are covered by U. S. patent No. 1,727,305 for use as repellents. They were the only type of repellent used by the Military for a while, but have since been compounded with other ingredients to obtain a more powerful mixture. No one repellent is effective against all insects. Each has a selective action.

524. WICK TYPE DEODORANT

Q: Some time ago I read about a deodorant smoke screen used by the Army. Can you tell me more about this. Do you know if the wick type air deodorant is patented? We are interested in this new process and would like to know of any companies that sell a base. Enclosed is a stamped envelope for your reply.

Q. S. C.—NORTH CAROLINA

A: The Army has devised a new type of Aerosol dispenser which is a metal container holding a solution of insecticide in liquified gas of high volatility under pressure. The refrigerant, known as Freon 12, is the material most used as solvent. When the nozzle of the container is opened, a spray of fine mist is emitted causing a minute dispersion of particles

of active substance. Such sprays have apparently been used to disinfest areas from insects, smoke screens, etc. U. S. patent No. 2,321,023 has been assigned to the Secretary of Agriculture for free use of American People. The wick type deodorant in itself is not patented to our knowledge, in fact we doubt if it could be patented, but a composition for use in a wick type deodorant has been patented and consists largely of formaldehyde and chlorophyl.

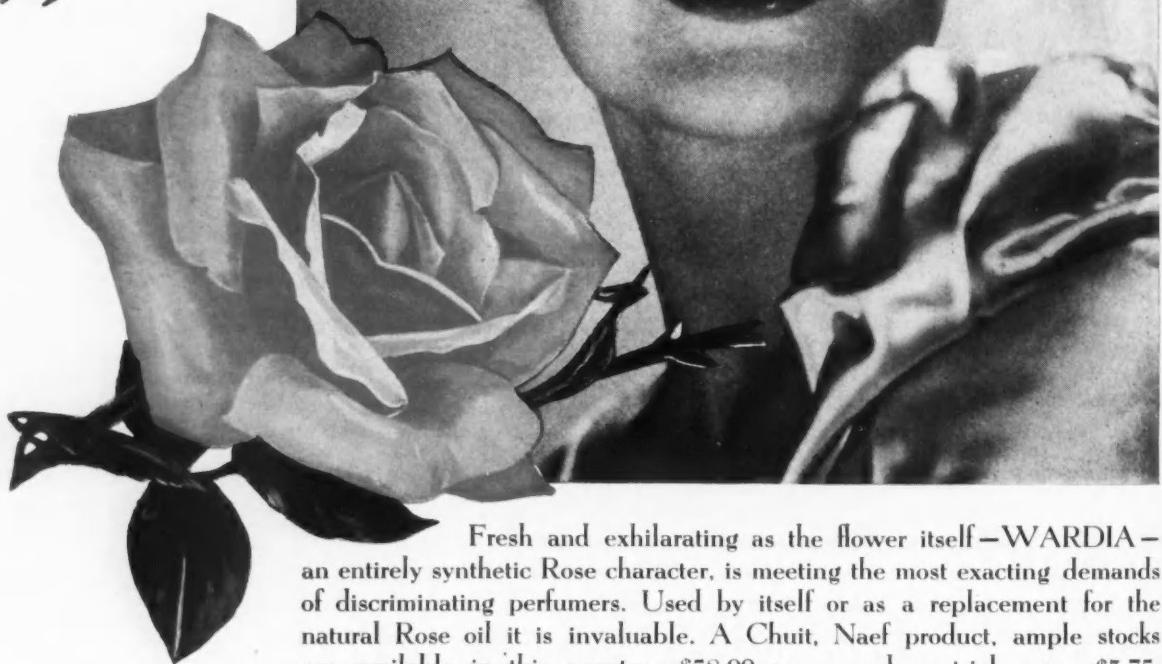
525. HOW TO FILTER COLOGNE

Q: Which is the best way to filter clear about a gallon of cologne or perfume extract without losing too much? How would you suggest to fill small bottles of the above product? Could you suggest a trade mark for such products? Could you give me some information regarding the manufacture of alcoholic liquors, as well as culinary essences?

S. S.—AUSTRALIA

A: You may filter your cologne or perfume extract through a tight filter paper or through a Berkfeld Candle. Both are available at laboratory supply houses in your country. Some bottles of perfume and toilet water, in the quantities you mention, can best be filled by using a small ampoule filling device, also available from laboratory supply houses. Hand filling is satisfactory for your volume. We are not in a position to suggest trademarks. It is suggested that you get in touch with a firm of trade mark attorneys in your own country. The best we can offer in the formulation of alcoholic liquors or culinary essences is to suggest that you buy a book on the subject. The name of such a book has been sent to you.

See Wardia



Fresh and exhilarating as the flower itself—WARDIA—an entirely synthetic Rose character, is meeting the most exacting demands of discriminating perfumers. Used by itself or as a replacement for the natural Rose oil it is invaluable. A Chuit, Naef product, ample stocks are available in this country—\$58.00 per pound—a trial ounce \$3.75.

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Sodium Methylate in Synthetic Perfumery

The preparation of aldehydes, ketones and esters with sodium methylate is described in this article . . . How to handle sodium methylate

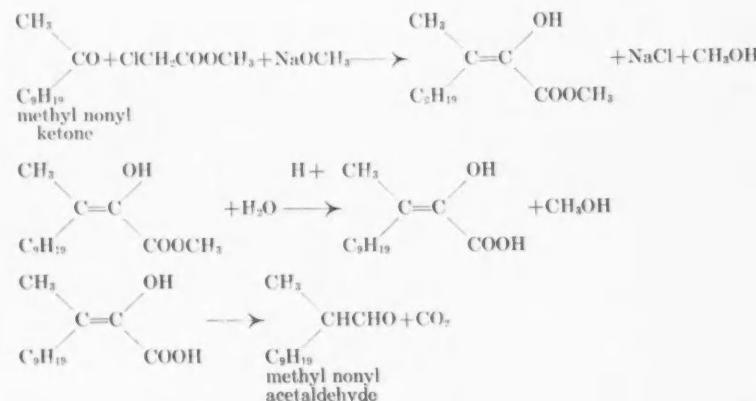
by G. D. BYRKIT and E. C. SOULE
Research Department, the Mathieson Alkali Works, Inc.

THE chemistry of perfume synthetics deals largely with the preparation of aldehydes, ketones, esters and ethers. These are the chemical constituents of natural perfume extracts, which impart their characteristic odors. In the search for substitutes for the natural product, whether it be an exact chemical duplicate or another chemical which may be used to simulate the desired odor, compounds of the same chemical classes must be prepared.

Sodium methylate, NaOCH_3 , is a reagent which is very useful in the laboratory syntheses of these compounds. However, in the past, it has been necessary for the user himself to prepare his requirements of this reagent from alcohol and metallic sodium. This is likely to be a dangerous procedure and often gives an unsatisfactory product, containing large amounts of alcohol and some inorganic alkalis formed by hydrolysis due to moisture in the alcohol or absorbed from the air.

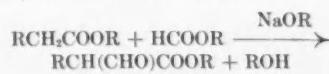
Sodium methylate is now commercially available in the form of a dry white powder, containing a minimum of 95 per cent sodium methylate, not over 2 per cent inorganic alkalis and no more than 3 per cent methanol. It has an apparent density of 0.4. This product may prove of considerable assistance in the manufacture of perfume chemicals, where many of the reactions involved will give satisfactory yields only by the use of a sodium methylate that is relatively free of alcohol and impurities.

Aldehydes, which are among the more important chemical compounds in perfumery, may be prepared by several methods involving the use of sodium methylate. Methyl nonyl acetaldehyde, for instance, may be prepared from methyl nonyl ketone by treatment with methyl chloroacetate in the presence of sodium methylate:²

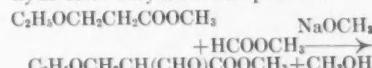


This is a general method for preparing secondary alkyl aldehydes from ketones.

Aldehyde groups may also be introduced by using formic ester in the presence of sodium methylate. Williams⁴ used ethyl formate, but, as in most other instances, the ethyl and methyl compounds may be used interchangeably. The general reaction may be outlined as follows:



Thus, the formation of an aldehyde ester may be accomplished:

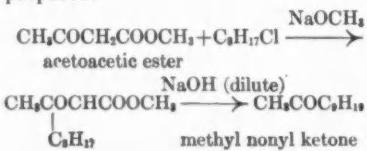


Another group of important perfume chemicals which may be prepared with sodium methylate as a reagent are the ketones. The preparation of methyl nonyl ketone which

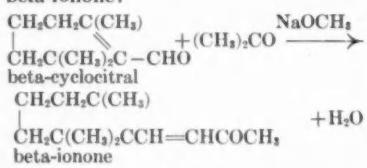
is used both as an intermediate and as a sweet pea odor illustrates the acetoacetic ester condensation, one of the most important reactions of sodium methylate.

Acetoacetic ester may be prepared by the condensation of two molecules of methyl acetate in the presence of sodium methylate. The ester will react with alkyl halides in the presence of sodium methylate to give mono alkyl derivatives. These alkyl acetoacetic esters similarly yield dialkyl esters. Hydrolysis of these derivatives

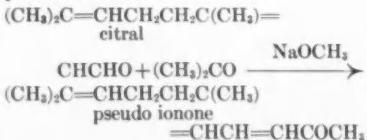
with dilute sodium hydroxide gives primary or secondary methyl ketones. In this way, compounds such as methyl nonyl ketone may be readily prepared:



Ionone, the well-known synthetic base for violet perfumes, is another ketone which may be prepared with sodium methylate as reagent. Beta-cyclocitral reacts with acetone in the presence of sodium methylate to give beta-ionone.³



Citral reacts with acetone in the presence of sodium methylate to give pseudo ionone:¹

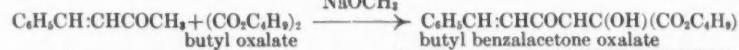
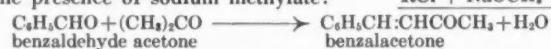


Methyl ionone may be prepared by a

similar condensation, substituting methyl ethyl ketone for acetone.

The condensation of ethyl acetate with acetone in the presence of sodium methylate yields acetylacetone, an important intermediate.

Butyl benzalacetone, a light screen medium in sun tan lotions and creams, is prepared by condensing benzalacetone with butyl oxalate in the presence of sodium methylate:



Another group of important perfume chemicals whose preparation may involve sodium methylate are the esters. Of particular interest is the sodium methylate modification of the Cannizzaro reaction. Aromatic aldehydes when treated with dilute sodium hydroxide form equal parts of the corresponding aromatic alcohol and the salt of the corresponding acid:

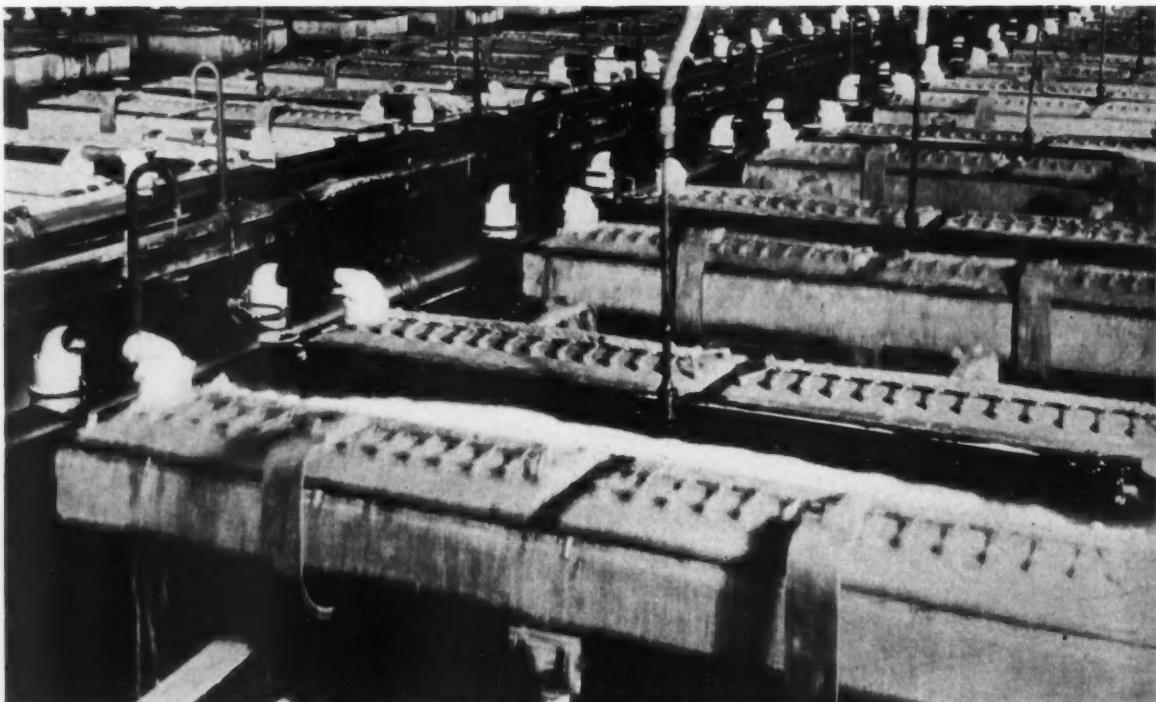


With sodium methylate, however, the reaction stops at an intermediate stage, with the formation of the ester. In this way, compounds such as benzyl benzoate may be made directly:

REFERENCES

- ¹ Hibbert H., and Cannon, L. T., *J. Am. Chem. Soc.*, **46**, 122 (1924).
² Lassar - Cohn, *Arbeitsmethoden für Organisch Chemische Laboratorien*, Vol. I; Fifth Ed., Leipzig: Voss (1923), p. 498.
³ Tiemann, F., *Ber.*, **33**, 3722 (1900).
⁴ Williams, R. R., and Cline, J. K., *J. Am. Chem. Soc.*, **58**, 1564-5 (1936).

Castner mercury cells in which salt is electrolyzed into its elements, sodium and chlorine. The sodium forms an amalgam with the mercury and is then treated with methyl alcohol in a reacating tower to form sodium methylate



Cosmetic Trends in the Middle West

Is leg make-up here to stay? . . . Will cream shampoo be generally accepted? . . . Men and women buyers contest the popularity of these and many other cosmetic items . . .

by JEAN MOWAT

CHICAGO'S row of State street department stores were once referred to as not stores but merchandise banks. Most cosmetic buyers would like to have an opportunity of banking goods for the holiday trade which began to get under way before the last of the overseas boxes were mailed for many a cosmetic item went into them.

SEX MAKES A DIFFERENCE

Studying trends in current and future selling in Chicago has proved much more fascinating than might appear from what many people consider a dull job. But it did reveal an interesting fact: women buyers are all out for educating the consumer. Men buyers put the goods on the counter and maybe say a prayer! If they don't move they assume the consumer doesn't like them. Take the matter of cream colognes. The men without exception say the product is not only at its peak but it never was popular. This is a statement made by leading buyers in high style stores and in popular drug chains. Women buyers most emphatically disagree and say that at last the consumers are coming in and asking for this cologne because it was through their complaints that they learned how to use it.

"For the first time since cream cologne came on the market," said a youthful buyer of cosmetics, "women have learned that one cannot douse it on the apparel or the hair. It must be applied to the skin if a delicate aroma is to be the result. Since women made that discovery the only difficulty we have is keeping it in stock."

The reason for the increasing popularity of this cologne is not merely due to the lack of alcohol for making the liquid type but because

women with dry skins—and the middle west is noted for that type because of the hard water—have found that the cream cologne gives them softness of the skin as well as fragrance. No woman can resist a two-in-one buy like that. Men buyers in the department stores merely shrug at the mention of this product and quickly state that they can't get enough of the regular liquid colognes.

CAKE MAKE-UP

Another battle that rages between the sexes is cake make-up. Popular price stores and chain groups state that the peak is about here.

Women cosmetic buyers are very cautious in their comments while expecting cake make-up to continue indefinitely. "Considering the fact that it came in through photography and has been ten years reaching a place where it is widely featured we expect it to continue in style, especially among the young girls," is a general opinion. These buyers place stress on the word "young," for women who have passed their acknowledged 35th birthday state with much frankness that such an application adds ten years to their face.

Simple addition shows why the idea continues to grow with the latter part of the teen-age group—they want to look older.

Another sex conflict is this: men assert that since this make-up became a must in the department their expensive powders have fallen to a new depression low. Women, on the other hand, say that as much cake is sold as powder and when correct instruction is given as to its application that it naturally follows that powder is used through the day.

Probably no point in the survey was more hotly contested than the topic of the outlook for leg make-up

in 1945. Chain purchasing agents want to know whether nylons will be back (they probably won't) and if so their purchases of leg make-up will be limited to certain brands that have always been good.

Women do not even consider hose, nylons or rayon sheer, as having a place in this picture for 1945. They assert that during the past three years their sales have been tripled each year and they are planning to do this again for the summer of 1945. Here's why: The school girls like the make-up and wear it most of the year. The housewife finds it saves her good hose. The business girl and the war workers, and even women executives, have come to enjoy the freedom and the coolness that leg make-up gives. Probably the women have also placed their dependency upon the fact that each shipment—say women buyers—is better than the last. These women buyers speak from experience and comparison notes with other buyers in the stores and the clerks. The men don't always receive the same story and merely watch the sales and check the stock.

CLEANSING CREAM AND TISSUES

The slight falling off in the use of cleansing creams throughout this area, and that includes such centers as Detroit, Des Moines, the Twin Cities, St. Louis and Kansas City, is laid to one major factor—lack of tissues for removing the cream. Towels are too expensive to be used for this purpose. Fine toilet paper has filled a small gap but most buyers aren't talking about it.

Paper mills don't see much change in the present output until after the fall of Germany, and then another six months will be required to put the machines into full operation, say

most of the executives in this field.

Fancy boxed soaps may well be a cherished Christmas gift, for those in the know assert that the future is dark for the next six months—which means until there is a change in the war outlook. Kansas City has been pushing finer soaps and making quite a point of what a well scrubbed face will mean to a woman and incidentally add to her glamour. With the brush situation as it is no mention of the value of a face brush, plus fine soap, is discussed in beauty columns.

Bath salts are among the most active sellers for water softeners and while the color and scent has much to do with the rapid movement of these the mere fact that they aid the skin and keep it soft and pliable make a woman continue her purchases. Most stores feature bath oils in conjunction with the salts, even making it a double sale and since the cold weather has arrived this is no trick. One leading company that has sent holiday circulars to its trade has a box in which these are combined—not a holiday type—but the regular package and anyone can "shift" it up from there and make it an elegant gift.

A \$5 IDEA

The only reason this idea is being passed on is that it holds a question mark for some one with ingenuity to produce the type of cover needed. It was in a leading woman's specialty shop and the customer complained to the buyer that she loved bath salts but loved showers more, so consequently she was not buying salts any more.

The buyer smiled and said: "That is merely because you don't know how to use them with the shower. After your soap shower rinse thoroughly and turn off the water . . . unscrew the shower part, place a handful of salts in it, turn on the water and you'll come out feeling not only fresh, but you'll be more fragrant than ever." And the thing works . . . except we had to call for help to put the spray part back! That's why we want help, a slip cover, salt filled.

ON THE UPGRADE

With a return to light tones in lingerie women are using more *dusting powder* for daily dressing, more *sachets* and in St. Paul *dry perfume*

by the stick is moving into higher selling brackets. In making this presentation stress is made that alcohol has gone to war and this is the neatest trick to preserve that eternal feminine allure!

Perfumes that used to sell by the bottle are moving but not in the volume once seen. Today women are purchasing finer perfumes and taking a dram, if their budget won't stand any more, and in many of the midwest cities it is an essence which is wanted. A drop or two of this is ample and always can be renewed. St. Paul has been making a style feature of perfume by the dram in a price range of 85¢ to \$3.25. Kansas City women have also been showing more interest in finer scents and essence types are wanted.

UNIT SALES INCREASED

Deodorant sales—which include deodorant and antiperspirant sales—are moving into higher brackets than many buyers had ever expected to see. While part of this is due to new customers from war plants who have discovered their value, an additional increase is said to be coming from the men who are using the stick or the cream and finding it easy to apply. Des Moines has been plugging cream and reports success in current sales.

Every buyer throughout the midwest generally agrees that the cream or paste deodorants are outselling the liquids for only one reason—ease of application and the fact that it can be done every day and one is absolutely fresh. On the other hand many women and some men who have used the higher priced end of the liquid deodorants are maintaining the sale of these at a figure which is said to be slightly over a so-called norm.

Cream shampoos which some firms stocked wondering how these would be accepted report excellent results and repeat business. The same is proving true of solid brilliantine.

Dusting mitts, with or without refills, are scheduled for peak sales next month. Smartly boxed they will be easy to wrap and make attractive. This is an item which during the past two months has shown an upturn in sales and deliveries are reported satisfactory. Chicago, St. Paul and Kansas City report a quick acceptance of fuchsia tones in lipstick.

"V" BOARD BOXES FOR OVERSEAS SHIPPING

The packaging of Ration Type "C" for overseas shipment, has been changed from nailed-wood boxes to Victory fiber board, the Office of the Quartermaster General has announced. The decision to use Victory fiber board ("V" Board) packing came as a result of 1½ years successful experience with such boxes in shipping canned fruits and vegetables to armed forces in all parts of the world. In addition to the severe climatic hazards, it is estimated that shipments reaching our fighting fronts often encountered as many as 100 handlings, many under primitive conditions and most of them imposing severe wear and mechanical strain on containers and contents. The "V" box has demonstrated its ability to "take it" under such conditions, and to deliver its contents to their destination in good condition.

The Quartermaster Corps uses the majority of all "V" board boxes produced. The development of this type of shipping container has been a joint venture of the Quartermaster Corps, Navy, War Production Board, War Food Administration and the container industry. The change over to "V" board in the packing of "C" rations is now being made, but present commitments for wood boxes will be carried out.

The "V" board boxes now being used for shipping "C" rations require only two straps—one lengthwise and one girthwise. A major part of the development is the outside sleeve. The container is solid fiber throughout, laminated with waterproof adhesive. The "V" fiber board box with sleeve reinforcing is lighter than wooden boxes and takes less space. One box contains eight rations (48 cans, enough to last one soldier for eight days or eight soldiers for one day).

French Morocco Olive Oil

French Morocco olive oil production came to approximately 4,000 metric tons for the crop years of 1943 and 1944. Rationing of the edible oil is at the rate of 250 grams for Europeans, with larger amounts going to natives. It is estimated that imports of 24,000 metric tons would be necessary if rations were increased to the levels permitted in Algeria and Tunisia.

Survey of Brazilian Mint Oil and Menthol

*The growing of *Mentha arvensis* in Brazil . . . Climatic
and soil conditions . . . Physico-chemical properties . . .
Factors influencing the future production of mint oil*

by DR. ERNEST GUENTHER

Chief Research Chemist, Fritzsche Brothers, Inc., New York, N. Y.

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(The last of three articles)



Freshly-cut forest cleared of logs, ready for mint planting

SINCE Brazil does not permit export of the complete mint oil, few, if any such samples have been examined in the United States.

According to Berzaghi,¹ The Instituto de Pesquisas Tecnologicas in São Paulo analyzed thirty-one lots of crude mint oil which had properties varying between the following limits: Specific Gravity at 25°C., 0.876 to 0.898.

Optical Rotation, -29°12' to -42°48'.

Refractive Index at 20°C., 1.4577 to 1.4695.

Ester Content, calculated as Methyl Acetate, 4.5 to 18.9%.

Content of Total Menthol, 65.2 to 88.9%.

Of these thirty-one samples, twenty-three contained more than eighty per cent of total menthol.

The color of the oil, according to Berzaghi² depends upon several factors, for instance, the time of harvest

and the condition of the plant material. Oils distilled from flowering mint possess a golden or yellow color, while those distilled from mint in the preflowering period are of darker color. Oils distilled from plants after the flowering period usually possess a somewhat greenish-yellow color. Fresh (green) plant material yields oils of a more intense color than dried herb.

Adulteration of the complete mint oils by the field distillers is occasionally observed. Sometimes they use cottonseed oil for this purpose; or they partly dementhelize the oil by letting it crystallize during spells of cold weather and by pouring off the liquid oil which they sell then as complete mint oil.

The first lots of Brazilian menthol were made on a very small scale, and in most cases without any previous experience, the apparatus used for the purpose consisting of simple ice cream freezers. The industry thus developed from a simple beginning, a house industry, so to speak. Today it has reached quite surprising proportions, some of the larger plants being equipped with very modern apparatus. The principle of menthol extraction consists of three steps, viz., formation of menthol crystals by freezing the complete oil, removal of the crystals from the residual oil by centrifuging and drying of the crystals.

The complete (crude) oil, after arrival from the interior, should be clarified previous to cooling (freez-



A mint distillery near Santa Anastacio, São Paulo, Brazil

¹ Caetano Berzaghi, *Cultura da Menta para Produção de Óleo e Menthol*.—a brochure edited by the Dept. Agr., State of São Paulo.

² Ibid.

ing) as it usually contains some water and mucilaginous impurities which prevent proper formation of the menthol crystals. For this purpose some manufacturers filter the oil, others centrifuge it in Sharpless or De Laval supercentrifuges, while others rectify it in vacuum stills. The latter process offers several advantages: the crystals of menthol form easier if a part of the complete oil is removed as foreruns, and the menthol crystals will possess a finer odor and flavor, not being contaminated with the bitter tasting high boiling constituents of the complete oil; furthermore, the remaining oil can be sold as *rectified* dementholized oil.

PROGRESSIVE COOLING FOR CRYSTALLIZATION

The purified complete oil is slowly and gradually cooled to progressively lower temperatures whereby menthol crystals form in each operation. The freezing process usually comprises three steps: the first at about $+14^{\circ}\text{C}$., the second at $+10^{\circ}$ and the third at -5°C . Every manufacturer follows his own ideas in this respect and uses certain modifications; this applies equally to the equipment.

The freezing plant proper consists of three tanks cooled with brine solution, or of numerous cells, such as used for the making of ice blocks, immersed into three tanks in which cold brine solutions of different temperature circulate. However, some manufacturers employ large refrigerator compartments, usually three, and therein freeze the oil in tin cans. The larger plants are equipped with regular freezing rooms, each cooled to the proper temperature. Gradual and slow cooling permits the formation of larger and more regular crystals; otherwise it would be difficult to separate the residual dementholized oil from the intricate mesh-work of crystals.

B. SEPARATION OF THE MENTHOL CRYSTALS FROM THE DEMENTHOLIZED OIL

This is performed by first decanting the remaining liquid oil from the crystals and by centrifuging the crystals in large centrifuges, rotating at a speed of about 1,200 revolutions per minute. Some operators wash the crystals during this process by

pouring small quantities of water into the centrifuge.

C. DRYING OF THE MENTHOL

The centrifuged crystals are spread upon trays in large compartments or special rooms and for approximately thirty-six hours dried in a slow current of air at a temperature of about $+26^{\circ}\text{C}$. This operation must be undertaken very carefully, as a too fast air current or too high temperature would result in considerable losses of menthol by evaporation, while insufficient drying would leave the crystals too wet. Traces of adhering oil may lower the melting point of the menthol crystals below that prescribed by the U. S. Pharma-

be obtained by first saponifying the menthol esters in the complete oil and by reducing the menthone to menthol with metallic sodium. A few of the larger and better equipped factories resort to such chemical means in addition to the regular freezing and thereby obtain dementholized oils which are chemically quite differently composed than those resulting from mere freezing. It is, therefore, not surprising that the dementholized Brazilian oils offered on the market are of widely different quality. When placing orders for dementholized Brazilian mint oils, the buyer should always inquire as to how the oil was prepared and base his contracts upon a definite minimum menthol content.



Operators at work separating the menthol crystals from the dementholized oil

copoeia ($+41$ to $+43^{\circ}\text{C}$). At least one Brazilian menthol manufacturer recrystallizes his menthol, which process yields a product of very pure odor, free from traces of adhering oil, but consisting of only small, needle-like crystals.

YIELD OF MENTHOL AND DEMENTHOLIZED MINT OIL

The yield of menthol evidently depends upon the menthol content of the original complete oil and upon the degree of the freezing operation. Because of the present heavy demand for menthol, every manufacturer now aims at a maximum yield of menthol, without much consideration for the menthol content of the residual, partly dementholized oil. Yields of menthol as obtained by mere freezing thus vary from forty to fifty per cent, are usually fifty per cent of the total oil. Higher yields of menthol can

He should also test his samples for the content of esters and menthone.

FACTORS INFLUENCING THE FUTURE PRODUCTION OF MINT OIL IN BRAZIL

The future production of mint oil and menthol in Brazil may be influenced by several factors about which, however, not much is known yet.

I. *Rust Disease*—This disease, which Brazilian plant pathologists classified as *Puccinia Menthae Pers.*, was probably introduced with the plant and made its first appearance around Paraquaú during 1944 in a more or less virulent form. It almost annihilated some of the plantings in the vicinity of São Paulo, which were located on less fertile soil at about 800 meters altitude. This happened especially during the damp and cold weather in the course of spring

growth. The mint rust in its diverse forms appears as yellowish spots, especially on the underside of the leaves near the soil. Later the spots extend to the stalks and to the higher leaves. Under favorable weather conditions, the rust destroys a great part of the leaves within a short period, affecting thereby not only the yield but also the quality of the oil and its menthol content. In the winter form, the spots are almost black. Optimum temperature for rust development varies from +15 to +25°C. During warm weather and periods of ample rainfall, the rust develops only faintly and does little damage. In newer regions favored by fertile soil and a moist climate, such as prevail along the Paraná River or on the Litoral, the rust has not yet appeared or caused only very little harm.

However, the disease may spread and may appear more or less violently in different years, doing more or less damage and influencing the output of the oil accordingly. The possibility must not be excluded that the disease will become so violent that the cultivation of *Mentha arvensis* in Brazil is periled and that it may have to be abandoned. It is much too early yet to form a definite opinion in this respect for the future. It is also possible, as happens so often with introduced diseases, that it loses its virulence gradually, that it will appear more or less violent according to weather and soil conditions

and that* it will influence the plant growth and the oil yield only to a limited extent. The third possibility is that the disease may disappear completely because the plant may become immune to it or because, in the long run, conditions are not suitable for the disease.

The whole Brazilian mint industry is much too young to arrive at definite conclusions yet. If the rust does no great harm, we may expect a considerable extension of the plantings and of oil production. The fertility of the soil in certain sections, the climate, the relatively low priced labor and the cheap working methods, plus the great reserves of virgin land, almost excludes any competition in other semitropical and tropical American countries unless, of course, the cultivation there is done according to very modern, scientific agricultural methods aiming at a very high yield of plants per acre.

As far as the mint rust is concerned, a number of measures have been recommended in order to combat it:

1. Yearly replanting.
2. The same land should never be planted with mint for more than one year.
3. When planting, the root cuttings should be imbedded at least five centimeters deep in order to prevent infection.
4. Immediately before planting,

the root runners should be treated for about ten minutes in water of 45°C. This is now being followed by many planters and has probably prevented a more serious spread of the rust.

5. No infected planting material must be used.

6. In cases of severe rust attacks, the plants should be cut at an early period and close to the ground.

7. Affected planting should be harvested before the arrival of winter in order to prevent the formation of the winter rust, which is the more violent form.

8. After the harvest, all leaf and stalk refuse should be burned.

II. The most important factor influencing the production of Brazilian mint oil during the coming years is the weather. If favorable i.e., if no droughts intervene, the growers expect normal yields of oil and good profits which will keep up their interest in mint and encourage the laying out of new plantings.

III. A factor limiting the production of Brazilian mint oil would be a greatly reduced demand and much lower prices which the United States importers and consumers are willing to pay. The admission of synthetic racemic menthol into the U. S. Pharmacopoeia could be a contributing factor. At present high prices the planters are quite enthusiastic in extending their plantings.

The cultivation of *Mentha arvensis*, first started in 1936, was probably introduced to Brazil by the Japanese immigrants. Pictured below is a typical Japanese home in the mint regions of São Paulo



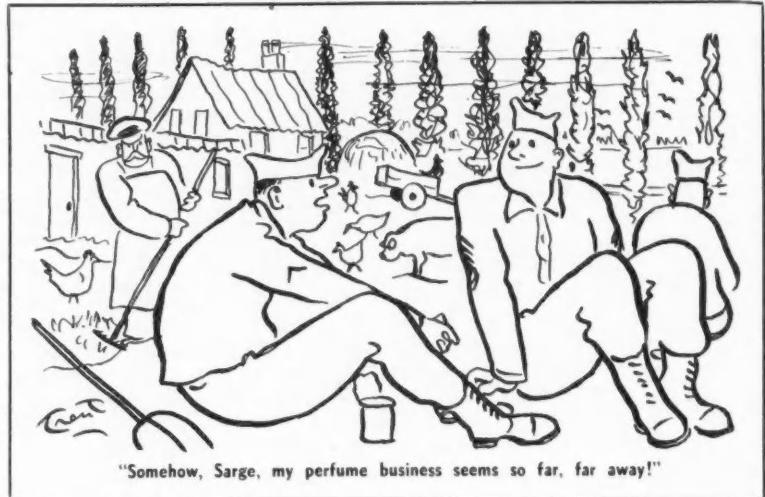
Short Adages

by R. O'MATTICK

THAT remarkable world-traveler (we do not like to say global-traveler because global came into use after this war began, and, of what we write this moment was the traveling done twenty years ago), Dr. Rowmateral, was recalling old days the other day.

"Ylang-ylang," he said, when we told him that some was expected to arrive here from Madagascar in the near future, "I remember Madagascar and Nossi-Bé, of course." Just to make conversation enough to be a good listener we said that we could never find Nossi-Bé on any map of Africa we had ever seen.

"It is a small island," the good Doctor continued, "a very small island and a volcanic one, about eight miles off the coast of Madagascar, which is the third largest island in the world. The main town of Nossi-Bé is Hellville—not at all like its name or like anything the movies portray of far-off mysterious islands on the other end of the world. Hellville is a most picturesque and quiet place with no wild animals or wild natives or wild dances—a sort of sleepy place where the most active creatures are large crickets and small chameleons. These little lizards crawl around and change their color for no other reason than that there seems to be nothing much else to do in Nossi-Bé. I remember watching them one day while having coffee and rum-cake at a little French tavern that tried hard to be a Parisian café. There was no one in the place except myself and the patron. As I was about to leave, a young curé, evidently a French missionary, walked in to say good morning to the patron. I had seen him before as it takes only three days to get acquainted with every European on the island. He liked to talk and he knew how to make good conversation. "Bon jour," he said, "et bon appétit. If you will light up your pipe you will have partaken of all of the native products of our little island." "Nothing but tobacco here?" I asked. "Ah, no," he replied, "tobacco is one of them but there is also coffee which you drink and sugar which I assume



you take with your coffee and then there is rum and most important, vanilla—both of which are in your rum-cake."

"Very good," I said, inviting him to join me in my déjeuner. "I wasn't aware of the fact that I was doing so much to help the home industries and, to make it complete, I shall light up my pipe while I offer you an American cigarette. But tell me, why do you say *all the native products*, omitting the ylang-ylang of Nossi-Bé, which is world famous?"

"I omitted this tree of the custard-apple family and its oil because I did not think that you would be concerned with its presence or aware of its use. I am pleasantly pleased to see an American tourist interested in our local flora, yet astonished to hear you state that our Macassar oil is world-famous."

It was my turn to be the informant. "I did not know of your coffee, your tobacco or your rum—all three of which are excellent, but it is because of the little greenish yellow flowers of flowers that I come to your charming island and have traveled thousands of miles to reach it." I went on to explain that in America we use large quantities of ylang-ylang to make perfume oils and that the ylang from Nossi-Bé is highly prized. I informed him that I had come to his island to negotiate some business with regard to the exportation of the ylang and also described the nature of perfumes and the essential oil business in general. His eyes opened wide when I mentioned the large quantities of perfume oils used for soaps and sachets and what-not. "You have

come to see the place where ylang grows," he said, "I should like to see this America to which it goes."

Somehow, the talk turned from ylang-ylang to Mousse de Chêne, the finest of which comes from Yugoslavia, that far-off country in the Balkans. And Dr. Rowmateral was ready with a story of his adventures in the home of the Serbs, Croats and the Slovenes.

"I ventured out to the great oak forests near the foothills of the Macedonian Mountains," he said. "I went alone because I became impatient with the guards who promised to take me there each day, but kept putting it off for one reason or another.

"When I reached the heart of the forest I could understand disinclination to make the trip. It was the loneliest place I had ever seen in all my world travels. Not a being in sight—just large massive oak trees, whose trunks were covered with oak moss, that lichen which many perfumers would give much to have now. There were no animals in the forest as far as I could see, but a number of wild-looking harmless pigs who did nothing but feed on acorns. In those days Mousse de Chêne of the finest quality was plentiful and so I little realized how important it would become because of its present scarcity. Here were those pigs grunting among the oak trees and the oak moss and I not concerned with anything in particular. Something like feeding pearls to swine, you might say," and he laughed at this recollection of his days spent near the coast of the Adriatic.

Processes of Manufacturing Cake Make-Up

First in a series of articles tracing the development and advancement of dry make-up . . . The wet and dry methods of manufacture . . . Its future in the cosmetic field

by JOSÉ MACIAS-SARRIA, PH.G., B.S.

I READ somewhere a comment on old-fashioned face powders, stating that the women of the Dutch East Indies have been making their own cake face powder. They use the following procedure: first, they soak the shelled rice for a day or two, drain it and expose it to the sun until the grains swell up. The swollen grains are then milled with the aid of water in their own small stone mills. From this paste they make their cake by hand. When the cake has dried out, they use a piece of wet cloth to rub the surface and smear the rice powder on their faces. This make-up gives them that even, pale, white, smooth looking finish typical of Oriental women. This may be where cake make-up had its birth. Looking through old books of formulas we find many products which resemble cake make-up, ranging from dried, compressed face powder to skin varnishes. (Poucher Vol. 2, page 520, 1932.)

ORIGINAL SKIN VARNISH

I cannot resist the temptation to quote Poucher, French Patent No. 619,404, 1932, for Original Skin Varnish. This is the formula:

750 Skimmed milk, evaporated to 250 cc.
add while hot
600 Zinc Oxide
250 Glycerine

Face color may be added. The product thus obtained (milk plus zinc oxide) mixed with a little glycerine gives a somewhat pasty substance which remains perfectly uniform for long periods. When applied to the skin it forms a layer like varnish which dries quickly. It adheres to the skin without cracking, streaking or fading, though it can easily be removed with water. This is what Poucher had to say in 1932.



José Macias-Sarría

Among the products of the past the one which had the most striking resemblance to a cake make-up, was a make-up paste sold in this country at the beginning of the second decade of the 20th century. Many companies sold this make-up paste under different trade names. On December 14, 1937, the well-known patent, U. S. No. 2,101,843, was granted by the U. S. Patent Office for the dry make-up cosmetic in solid cake form.

As the easiest way to compare the 1937 patent with the make-up paste of 1913, I shall give a rough approximation of the two formulas.

To complete the survey on the patent, the synthetic wax (which

here includes the mineral oil) seems to be as follows:

FORMULA A-2

	Per Cent
Mineral Oil	80.
Beeswax	2.24
Stearic Acid	13.5
Triethanolamine	1.34
Potassium or Sodium Hydroxide	.66
Cetyl Alcohol	2.24

The patent also mentions lanolin which is present in the make-up paste (Formula B) in the list of their water soluble or water miscible agents. In addition the patent uses a binder in the form of a 2 per cent of quince mucilage in the water.

The make-up paste (Formula B) was sold in several shades: Flesh, Brunette, etc., with colors obtained from Eosin and others sold at that time as "colors for liquid face powders." In its manufacture, the following procedure was employed. The lanolin was melted with the mineral oil and the mixture was incorporated to the powders; finally the glycerine water solution was added. This gave a mass of the consistency of dough, which was shaped and pressed by hand into porcelain jars with loose porcelain lids sealed with tape. The tape unfortunately permitted moisture to escape and the cake dried out. Jars in that condition were returned to the factory; when shaken you could hear the loose cake flap around inside. If the imagination of some-

PATENT FORMULA	FORMULA A		FORMULA B	
	WET	DRY	MAKE-UP PASTE	WET
Pigments (including Lakes) earth colors, titanium dioxide, zinc oxide, etc.	27.4	49.	Zinc Oxide	26.5
Talc	20.72	37.	Fillers, Chalk, etc.	26.5
Total	48.12	86.		53.
Water	44.		Water	18.
Diethylene Glycol	3.36	6.	Glycerine	20.
Mineral Oil	3.56	6.4	Mineral Oil	6.6
Synthetic Wax	.89	1.6	Lanolin	2.2

one had worked then, by adding some glue to the bottom of the jars, we would have had a dry cake make-up as early as 1913.

PRODUCT MADE WATER RESISTANT

Lanolin and mineral oil were added to the make-up paste (Formula B) to make the product water resistant and since on drying the oily mixture is absorbed by the pigments, it turns the pigment water repellent on application to the skin. The addition of glycerine, a water soluble or water dispersing agent, made the make-up paste readily wetted by water and capable of being applied to the skin by means of water. Besides these properties, the water dispersing agent made the make-up paste removable from the skin by soap and water and without the need of a cleansing cream. Here I shall call, technically speaking, these agents: glycerine, diethylene glycol, etc., "plasticizing agents" in disagreement with the patent. These do not dry out, on the contrary they keep 5 per cent moisture in the cake, and mainly give the product a plastic property when the product is fresh or somewhat damp. The make-up paste according to the labels, was applied to the skin by a sponge or wet cloth.

To conclude this comment on the cake make-up paste and the patent, I believe that the company sponsoring the dry make-up cake deserves the most enthusiastic praise, because they are the ones who have put over this product in a brilliant way. If I make any criticism, it is entirely from the technical point of view, since naturally with time and new raw materials a great deal of advancement has been accomplished, as I shall show in succeeding articles.



Dry method of mixing the binders by hand

METHODS OF MANUFACTURE

The rival companies, rather than feel jealous, should open mindedly praise the patent owners since they have increased the number of "cosmetic-conscious women" and are greatly responsible for a make-up era. Before discussing the new tendencies on dry make-up cakes, I want to describe the methods of manufacture.

First: The Wet Method:

Here a liquid emulsion (Formula A-2) is made with the mineral oil, stearic acid, triethanolamine, plasticizers, etc. The binder or mucilage is added and the whole incorporated to the powders and pigments, placed already in the heavy paste mixer or a pony mixer.

Larger quantities of the liquid emulsion could be made ahead and stored for daily use. The water should be cut down to a minimum because this paste has to be dried and the less water, the sooner it will dry. It is best to have the colors and other pigments micropulverized before you incorporate the liquid emulsion or have the colors and powders treated in the same way you make regular face powder.

By doing this, you wouldn't have to run the paste through a colloidal mill obviating this troublesome operation claimed by some. The paste is now spread on trays and dried over night in warm chambers or drying ovens. The following day perfume is added and the dried magma is crushed and sifted through a No. 40 mesh sieve; the powder is now ready to press. It might be, with low per cent plasticizers and with a new excellent binder, that you can dispense with the micropulverizer first, and instead micropulverize the dried magma; reducing two operations to one.

Second: The Dry Method:

This is by far the best method and the one now most universally used. After the powder and the colors are micropulverized, they are run through a spiral mixer where the binders and oils with only from 4 to 5 per cent of water, and the perfume, are sprayed. The wet powder is now passed through a No. 40 brushed sieve and mixer and then it is ready to feed to the hoppers for pressing. I believe that even the liquid emulsion (Formula A-2) very low in water could be sprayed by steam heating

the sprayer. The perfume would have to be sprayed later when cooled. By the dry method a great deal of labor has been saved. For drying ovens alone run to about \$8,000.00 with a capacity for about 150 pounds per night. Besides this cost, fuel, time, crushers, labor and space are saved. When the micropulverizer is entirely dedicated to a cake make-up, the spraying can be done while the powder pours from the micropulverizer into the brushed screen. Small manufacturers of cake make-up use their face powder sifter and mixer alternately for face powder and cake make-up. They set a small pressure sprayer over the brushed sifter. In using some of these sprayers, a mechanic has to make some adjustments, as some of the sprayers, like the fly sprayer, spray air, too, which would blow the powder. The pressure has to be exercised over the surface of the liquid. To avoid the wetting of the brushes, the liquid could be sprayed over the powders in a box. Keep the wet powder in a metal container and sift it next day.

(Editor's Note: This article will be continued in an early issue.)

El Salvador Paper

Imports of paper, cardboard, and bristol board, as well as manufactured products into El Salvador amounted to 1,110,122 gross kilograms during the first six months of 1944.

Egyptian Henna Production

Exports of Egyptian henna have fluctuated greatly during the past seven years. During the first five months of 1944 more henna was exported than during the entire preceding year. France was the principal buyer until 1940, with the United States second. In that year exports to France stopped entirely, and in 1942 the United States stopped buying. Turkey is now taking the entire output.

Most of the henna grown in Egypt comes from the Sharquia Province in Lower Egypt.

Production for the 1943-44 season is expected to decrease. This is due to the lessened demand from abroad, and to the fact that the Government is supplying fertilizers to encourage the production of food.

Important Uses of Glycerine in Emulsified Products

Valuable as an emollient in the prevention of industrial dermatitis . . . Standard ingredient of recently developed preparations . . . Formulas given

by GEORGIA LEFFINGWELL, PH.D.,
and MILTON A. LESSER, B.Sc.

PRODUCTS based on the principles of emulsification are revolutionizing modern industry and making available a variety of new and useful products at reduced costs. Probably nowhere has emulsion technology reached such heights of development and application as in the field of cosmetics. The knowledge thus acquired has been extended to the field of skin protectives and is finding ever-expanding utility in dermatology. The same principles are now being employed in perfumery. They have long been known to flavor manufacturers.

Glycerine finds many important uses in the formulation of these modern emulsified products, serving both as an adjunct to the emulsifiers and as a major constituent of the aqueous phase. Although De Groote¹ has suggested that viscous bodies like glycerine may be considered as emulsifying agents because they exhibit certain surface attraction characteristics, not all authorities include glycerine in this category. It has been included, however, among substances that reduce interfacial tension² and it has been recommended as a "wetting" agent in the manufacture of technical emulsions.^{3, 4} Of definite value when used in combination with some gum or other agent in making oil-in-water emulsions,¹ addition of from 2 to 3 per cent of glycerine facilitates emulsification when cholesterin, oxycholesterin and similar substances are used as emulsifiers for water-in-oil emulsions.⁵

Because careful balance between the water and the oil phase is essential, glycerine is often included in emulsions to prevent loss of essential moisture.⁶ Through its hygroscopic action it helps to avoid excessive drying, "skinning" or thickening of the

product, and thereby greatly extends its shelf life.¹ Since freezing has a deleterious effect on many emulsions, the anti-freeze or freezing point depressing qualities of glycerine are often of definite value in emulsion products shipped to various parts of the world. The high boiling point helps to assure continuous effective action under a wide range of climatic conditions.

Bennett⁷ observes that transparent emulsions are made by equalizing the refractive indices of the phases and stabilizing the emulsion by equalizing the phase densities. Glycerine, he points out, is among the liquids suitable for raising refractive indices. Chromatic emulsions also benefit from the use of glycerine.

GLYCERINE'S ROLE IN COSMETICS

Quite apart from its use as an adjunct to emulsifiers, glycerine serves many useful functions as constituent of the aqueous phase. Fully miscible with water and alcohol, it is an excellent solvent and dispersing media. Because it is a heavy fluid, glycerine may be an important factor in controlling viscosity. According to De Navarre,⁸ the role played by glycerine in most cosmetics can fall into one of the following classes: a) humectant, b) emollient, c) anti-freeze, d) plasticizer and e) spreading agent. While all of these effects are important, this writer considers the last two as most important in toilet goods formulation. These and other actions are similarly employed in producing skin protectives and dermatological ointments. Perfume and flavor emulsions call into play still other important characteristics.

"Emulsions figure predominantly in cosmetic preparations," says Bennett.⁷ Indeed, with the obvious ex-

ception of powdered products, it may be said that hardly a phase of modern cosmeticology has remained unaffected by the application of emulsion technology. Outstanding among items that have benefited by the use of these principles are the many varied products of the so-called "vanishing cream" types. Modifications to meet varied requisites are found in every branch of the industry and literally scores of good formulas are available in the technical literature. Many of these products, such as hand creams and brushless shave creams, often represent improvements over older kinds of products. Retaining the best of the old for inclusion in the new, glycerine remains a standard ingredient of most of these more recently developed products.

Utilizing modern emulsifiers, numerous and varied glycerine-containing products have been suggested. By way of illustration, one might mention the series of non-fatty face creams, for women with excessively oily skins, discussed by Vallance.⁹ One such cited by this writer, consists of:

Glyceryl monostearate	16.0	per cent
Mineral oil	4.0	" "
Glycerine	4.0	" "
Ceresine	4.0	" "
Water	72.0	" "

Suitable additions, such as 0.5 per cent of titanium dioxide or a little cetyl alcohol or deodorized cocoa butter may also be included.

The proportions of fatty components are generally much higher in skin conditioning creams. This is illustrated by the fairly simple, easily prepared product suggested by Kalish:¹⁰

Glyceryl monostearate	15.0	per cent
Mineral oil	25.0	" "
Glycerine	5.0	" "
Water	55.0	" "

Often in the formulation of glycerine-containing emulsions for skin care, the emulsifying agent is formed *in situ* during the mixing of the two phases. This point was recently illustrated in Thomssen's¹¹ very indicative discussion on brushless shaving creams; triethanolamine stearate being the substance formed:

Stearic acid (triple pressed)	240 lb.
Beeswax	80 "
Mineral oil	40 "
Triethanolamine	15 "
Water (distilled or softened)	1210 "
Borax	8 "
Sulfonated castor oil	4 "
Glycerine	48 "

Frequently, two types of emulsifying agents are used to complement each other and provide products of improved stability and action. Sometimes combinations such as gums or mucilaginous materials and triethanolamine soaps are employed in the production of hand lotions. In other more recent examples, such as the glycerine-containing hand lotion described by Kalish,¹⁰ other combined emulsifiers are employed. This authority points out that the simplest hand lotion consists of a solution of equal parts of glycerine and rose water; the usual modern form, however, is a liquid emulsion like the following:

Glyceryl monostearate	3.0 per cent
Cetyl alcohol	0.3 " "
Methyl cellulose	1.0 " "
Alcohol	10.0 " "
Glycerine	10.0 " "
Water	75.7 " "

Methyl cellulose, used in the above preparations, is one of the more recent materials finding use in the production of a variety of toilet preparations.¹² Forming a mucilage which lowers surface tension and which is resistant to alkalis, acids and bacteria, methyl cellulose is a good emulsifying agent. For instance, a good hand cream containing a large proportion of glycerine which is not too tacky and which does not leave a greasy surface is made from:¹³

Methyl cellulose, 5% solution	25.0 parts
Glycerine	15.0 "
Olive oil	4.0 "
Stearyl alcohol	2.5 "
Tincture of benzoin	2.0 "
Distilled water, to make	100.0 "

PROTECTION FROM SKIN DISORDERS

Midway between the realm of the cosmetician and the dermatologist are the new products generally described as skin protective creams. Now finding extensive use to ward off

factory skin disorders, these products represent close cooperation between the cosmetic chemist and the industrial physician. Glycerine is a frequent and important constituent of these now well-accepted products.¹⁴ Valuable as an emollient to counteract harsh skin irritants encountered during work, it is also in itself a valuable barrier substance against certain deleterious materials, including many solvents and greases. Glycerine is included in a number of standard skin protective formulas, especially those of the vanishing cream type.^{15, 16, 17} Of interest in this connection is the protective cream recently developed by Downing and his associates¹⁸ after a study of many products of this type. Finding that many of the products available on the market did not meet their own very high standards, they prepared one of their own from:

Stearic acid	10.0 Gm.
White wax	2.0 Gm.
White petrolatum	4.5 Gm.
Triethanolamine	1.5 cc.
Glycerine	8.0 cc.
Distilled water	54.0 cc.
Talc	20.0 Gm.
Perfume	as desired

After being tested for several months, this has been found to be effective in reducing the incidence of dermatitis due to mechanical irritants and various types of industrial grime. The cream is said to contain no irritants or sensitizers, to be easily removed, stable and relatively inexpensive and easily prepared.

Homogenized and emulsified creams are rapidly supplanting the greasy petrolatum and other fatty ointment bases formerly used in treating skin diseases.¹⁹ Long an advocate of improved dermatological preparations, Goodman²⁰ has stressed that the choice of a proper base is as important as the inclusion of the active ingredient.

Hence it is understandable that emulsified bases should be finding increased utility in dermatology on the basis of proved superiority. Pharmaceutically elegant and therapeutically efficient, many of these newer products are based on principles worked out by cosmeticians. Glycerine, of importance in many phases of both cosmetology and dermatology is, of course, a standard ingredient. This is apparent in the discussion on modern ointment bases presented by Prinz and Ereaux.²¹ In considering

oil-in-water emulsions, they pointed out that multiple variations preclude given definite formulas. In general, however, a modern cream made with modern ingredients will contain: (a) one-half to 4 per cent of a suitable wetting agent; (b) 10 to 40 per cent of one or several emulsifying agents, and any desired oil; (c) 5 to 10 per cent of glycerine as an anti-drying agent; and (d) the rest water.

Also indicative is the following glycerine-containing vanishing cream base included among those suggested by Goodman:²⁰

Glyceryl monostearate	12.0 Gm.
Yellow wax, U.S.P.	2.0 Gm.
Glycerine	6.0 cc.
Corn oil	4.0 cc.
Water, to make	100.0 Gm.

PERFUME EMULSION COMPOUNDS

Leaving the field of emulsified preparations for the care, beautifying, or treatment of the skin, one comes to a consideration of perfume emulsions. Quite new in many respects, interest in these products has been heightened by alcohol limitations. While one hesitates to make predictions, it is probable that products of this type will retain a large measure of popularity in the post-war period. Glycerine has found a useful role in emulsion perfume compositions. In one instance 15 per cent of glycerine was employed in a product of this type.^{22, 23}

Perfume and flavor compounding have many points in common. Glycerine, however, has far more applications in the latter field. In flavoring compounds, it is valuable not only for its fine solvent and dispersing action, but also for many other qualities, not the least of which is its unquestioned acceptance as a wholesome and nutrient-providing food constituent.²⁴ One need not go into details on the significant role played by glycerine in the production of emulsion flavors, since this phase of utility has been quite thoroughly covered in the recently reprinted series of articles by De Groote¹ originally published in this magazine. Others have described emulsion flavor compositions with glycerine as a major constituent; gums such as acacia and tragacanth being used as the emulsifying agents.²⁵ It might be mentioned, however, that glycerine has been recommended in emulsion flavors to prevent them from freezing and thus destroying the emulsion.²⁶

From the foregoing review it should be evident that glycerine is a most valuable adjunct and component of many products based on emulsification principles.

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²³ Anon.: *Schimmel Briefs* No. 91, Oct. 1942.
²⁴ Leffingwell, G. & Lesser, M. A.: *Food Field Reporter*, Aug. 3, 1942.
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²⁶ Anon.: *Am. Perf. & Essent. Oil Rev.*, Aug. 1940, p. 51.

Books of the Industry

FUNDAMENTAL ORGANIC CHEMISTRY, Ed. F. Degering & Collaborators. 485 pages, illustrated and indexed. Planographed by John S. Swift Company, Cincinnati, Ohio. 6 x 9 inches, 1942. Price \$3.00.

It is this reviewer's opinion that the author attempts to get too much information into the book. The continuity is not at all smooth and as a result, the reader gets the feeling of being taken for a roller coaster ride throughout the contents. While there is much worthwhile material presented, it requires better organization, if it is to be used as a student text. The author claims that there is a need for a book that gives the student a kaleidoscopic survey of the whole field of organic chemistry before the student is exposed to the individual compounds and type reactions.

This reviewer does not agree with the author because in this tendency to simplify his book, the opposite has actually been achieved. The beginning student cannot help but be grossly confused. The author suggests in his preface that this particular section or division may be skipped without sacrificing the usual approach to chemistry. I am in full accord with him. The space of 89 pages so wasted may have been better devoted to expanding the chapter on Sulfur Compounds, for example, and a few others.

Regardless of these shortcomings, the author's brilliant presentation is unusual in other respects too. Chemical reactions are given, additional

data as to what makes them go, such as the need for dry reactants, catalysts, alkalis or heat, as the case may be. Too often a student attempts a reaction that does not go as it should because all of the requirements were not known. Paragraphs are numbered for easy cross checking. Footnotes and suggested collateral reading are also good.

Planographing of the book tends to run the type together, making it difficult to read. If this book is intended for use by first semester students of organic chemistry, it has failed its purpose. If, on the other hand, it is intended as a general reference, it is more useful because of the mass of data contained in it.

M. G. deN.

THE MATHEMATICS OF PHYSICS & CHEMISTRY, by H. Morgenau and G. M. Murphy. 581 pages, illustrated and indexed; 6 x 9 inches. D. Van Nostrand Co., New York City. 1943. Price \$6.50.

The authors have selected topics in the mathematics and physics of chemistry that they have found most useful in their own teaching. The subject matter is presented in a clear and readable manner. Most chapters can be understood by college seniors majoring in physics and chemistry. Often proof of a problem is given with the answer to aid the student in understanding the subject.

Continuity is good. The book is well printed and bound. It is adapted for self study.

M. G. deN.

Glycerine—Post-War Outlook

Glycerine producers express a general feeling of optimism regarding the outlook. Domestic consumption is gradually working up to a point where it is about balancing production and stocks in the hands of the Commodity Credit Corporation have been reduced to below two million pounds. Use of glycerine in coatings promises to be exceedingly heavy in the post-war period. For the moment no shortage of material is indicated, but the trade believes there is a tremendous potential demand for material to be used abroad.

Citric Acid for Peru

Before the war Italy, Germany and Spain were the chief sources of citric acid for Peru. Citric acid is not produced in Peru and the United States has been the principal supplier since the outbreak of war. It is used extensively in the manufacture of soft drinks, wines and pharmaceuticals.

Tartaric acid is used to supplement the supplies of citric acid. The chief source of supply has been Argentina, although some comes from Spain occasionally, when shipping space can be arranged for, and supplies are at hand.

Technical Abstracts from Scientific Literature

These brief abstracts listed provide a convenient key to current scientific literature of the world on perfumes, cosmetics, soaps, dentifrices and other preparations

Terpineol. U. S. 2,336,575. A tert-p-menthadiol is heated (suitably to between 80° and 140°) with a solution of a carboxylic acid, such as lactic, citric or phthalic or tartaric acid, having an O-containing substituent, other than a first carboxyl group, which may be a hydroxy or carboxyl substituent, and a dissocon. constant for the first H of no more than about 1.5×10^{-2} at 25°, the constant being sufficiently great and the acid being sufficiently soluble in water to give a solution having a pH in the range of about 2 to about 3.5, until conversion is substantially complete; the terpineol formed is recovered from the mixture as by distillation, as formed. Several examples with details are given.

Bibenzyl. U. S. 2,344,188. Bibenzyl is first prepared by the Friedel-Crafts method. The residue (50 parts) containing high-boiling by-products is heated with a mixture of benzene (800 parts) and ethylene dichloride (100 parts) in the presence of anhydrous aluminum chloride (0.1) and metallic aluminum (5 parts). This procedure increases the yield of the bibenzyl, and the use of metallic aluminum permits the decrease of the amount of aluminum chloride.

The Neutral Red Fat Test as a Test for Lard and Bacon for the Beginning and the Course of Rancidity. F. Schonberg. *Z. Fleisch. u. Milchhyg.* 53, 61-2 (1943); *Chem. Zentr.* 1943, I, 1231. The reagent is a freshly prepared neutral red solution 1:10,000 in tap water of pH 7.0-7.2. It has a yellowish red color. The solution is poured over a sample of fat the size of a hazelnut. Unobjectionable lard becomes greenish yellow, old but still edible lard turns yellow to yellowish brown; incipient rancid samples become yellowish brown to reddish and a rancid sample turns red to reddish violet. Under ultra-violet the colors are, respectively yellow

to greenish yellow, yellowish brown, reddish orange and red to red-violet fluorescence. Tests can also be made on melted fats. (Through *C. A.* 38, 3375, 1944.)

The Toxic Action of the Sweetening Substance "Dulcin." Andre Kling, Daniel Bovet and Isabelle Ruiz. *Bull. acad. med.* 125, 69-72, 1941; *Chem. Zentr.* 1943, I, 302-3. Daily doses of 0.1 g of dulcin per kg given to dogs for 16 to 20 days caused loss of weight. Post-mortem findings were widespread congestion, destruction of the blood corpuscles, fatty infiltration of the adrenals and other lesions. The effect is cumulative. To prove that impurities are not responsible for the toxic action, groups of guinea pigs were fed for 10 days, daily doses of 0.1 g of commercial dulcin, of a sample purified by repeated recrystallization and of the fractions of crystallization containing the accumulated impurities. The toxic effect was the same in all 3 groups. (Through *C. A.* 38, 3360, 1944.)

Insect-repellent Compositions. U. S. pat. 2,293,255 and 2,293,256. Compositions suitable for repelling mosquitoes are formed containing a substantial proportion of ethylene glycol dibenzyl ether, diethylene glycol butyl benzyl ether or diethylene glycol monobutyl ether (suitably in alcohol, glycerol or an oil). 2,293,256 relates to the like use of ethylene glycol monophenyl ether, ethylene glycol monoeguenyl ether, diethylene glycol monobenzyl ether or diethylene glycol monophenyl ether. (Through *J. A. Ph. A.* 32, 258, 1943.)

Insect-repellent Compositions. U. S. pat. 2,274,267. Compositions suitable for use on the skin or clothing are formed containing dibutyl l-malate, diethyl dl-malate, benzyl lactate or tetrahydrofurfuryl lactate (suitably with corn oil or other vegetable or mineral oil).

The Chemical Conditions for the Occurrence of the Taste Sensation "Sweet." Richard Reinicke. *Zuckerind.* I, 79-82, 1943; *Chem. Zentr.* 1943, II, 1929. New types of structural models are developed. The sweet sensation does not seem to depend on a heterocyclic ring but on at least two oxygen tetrahedra in para position with two intervening carbon tetrahedra. In cane sugar these two components are joined to a single molecule similar to the graphite structure. (Through *C. A.* 38, 3303, 1944.)

Use of Metal Plates for Testing the Abrasiveness of Dentifrices. M. L. Tainter and Sidney Epstein. *J. Dental Research* 22, 381-9, 1943. Comparison was made, in a special testing apparatus, of the abrasion of human enamel and of plates of copper, antimony and silver, by certain dentifrice ingredients and common dentifrices. No correlation existed between the abrasion of the enamel and of the various metals. The latter were of value, however, for the detection of the presence of small amounts of highly abrasive material, e.g., emery dust in precipitated chalk. (Through *C. A.* 38, 3090, 1944.)

Glycerol Substitute. A glycerine substitute for pharmaceutical uses is a mixture of magnesium chloride (hexahydrate) 33.3 per cent and urea 34.5 per cent, specific gravity 1.247. This is recommended by the investigators for lowering the freezing point in pharmaceutical applications. One part of this preparation with two parts of water will freeze at -12°C. (Through *Glass Packer* 23, 372, 1944.)

Hair and Skin Tonic. Ger. 715,803. The tonic consists of a strongly concentrated alcohol solution of equal parts of lecithin and benzoic acid. (Through *C. A.* 38, 2168, 1944.)

The Gossiping Guide to the News

*Cosmetic demonstrators essential to the industry . . .
Good-selling names for new products ensure post-war
success . . . Need for wider reading of business news*

IN spite of all my naggings, a lot of you people didn't get your Christmas orders in. As a result, deliveries are far behind. This goes for manufacturers as well as retailers. Considering the upset condition of the market, your spring ordering should be finished and you should be planning for next fall. And where are most of you? Bogged down in THIS Christmas! Come now, take a deep breath, give your stenogs a big bonus and stay all day Saturday writing orders. But, get those orders in the works or your supply houses will never be able to accommodate you. . . .

A CHEERFUL NOTE

Boxes being the bad bottleneck that they are, I was quite prepared for a dismal report from Philip H. Jaffe, president of Paramount Container Corp. So I am pleased to be able to report a more cheerful outlook. Government orders come first but those orders have slacked and civilian business gets the benefit. More boats filled with pulp have been coming in. In general, boxes for the spring trade will be easier than the Christmas boxes were. . . .

BUT . . . like Thorstein Veblen, having proved one point, I shall now proceed to prove the exact opposite. The big BUT is the new order on gift packaging which has all the houses holding their heads. Plans for package assembling of spring items is going forward. But if the present order stands, the items will be shipped and the salespeople will have to suggest various items instead of having them assembled in one package. Personally, I can see why gift packaging came under fire when cardboard is as short as it is. But I should also like to point out to the various govern-

by RAYMOND W. LYMAN

ment agencies nibbling into cosmetics that the industry pays a handsome tax and does the third largest business in the country with the smallest manpower utilization of any large industry. . . .

SPECIAL AWARD

A very special bouquet goes from this department to Miss Neva Bradley, Daggett and Ramsdell, for her forward-looking plans. This extraordinary lady has alternate plans ready for execution depending on various decisions affecting the cosmetic industry. It takes real genius to be able to have orders placed to take advantage of the relaxing of emergency orders. And, I should like to point out here that only houses fortunate enough to have old hands at the wheel have such foresight. Standard Oil should say special prayers to the Chinese god of beauty for the protection of Miss Bradley! . . .

BUSINESS READING

I have been struck lately with the need for better and wider reading of business news. In addition to THE AMERICAN PERFUMER's invaluable trade news, are you reading at least two daily papers faithfully? Do you read *Forbes* or *Financial World*? Have you read Hayek's *Road to Serfdom*? It's a MUST book. Did you read Queeny's *Free Enterprise*; Eric Johnson's *America Unlimited* and Isabel Paterson's brilliant *God of the Machine*? Add to these the two Ludwig von Mises' *Omnipotent Government and Bureaucracy*. Read the *Wall Street Journal* faithfully—not the Stock market quotations but the good reporting and editorials. Order

the Department of Commerce bulletins on Domestic and Foreign Trade. Lastly, buy a paper from another section of the country, rotate each day—Dallas, Richmond, San Francisco, Chicago, Des Moines, Nashville, Seattle, Cleveland, Boston, Washington. You get the idea. Presently, you will find splendid reporting done for individual papers will give you a real feeling for a section. And the foreign news will be so variedly reported that you will have a better sense of the foreign news itself. Keeping posted is a job every business man needs to pay especial attention to or he won't remain in business!

DEAR F.T.C.

Have you ever taken a look at the income from toiletries, dear F. T. C.? I doubt it. Mr. Morgenthau certainly can't like your Cease and Desist from Demonstrators order. The idiotic, according to me, consumer movements sponsored by the various socialistic gents—anathema to Mr. Hayek—never look at what the consuming public really demands. It may not be economic, from one sense, to have a demonstrator show madam how to smear a given cream on her face. But madam likes the attention. Some stores probably hollered because they didn't rate a demonstrator and the bureau went into high gear. The facts of life, still according to me, are simple. A store must have enough business to rate a demonstrator. And, dear F. T. C., if you stop demonstrators, you'd be very surprised how much less revenue there would be to pay your dear salaries. The consuming public is like that! Lessons in economics will be supplied at \$100 a lesson for any bureaucrat who would like to apply. The cost would be \$1 and the annoyance value \$99. And I set my own price for the lessons and if the F. T. C. thinks their annoyance value is less than \$99, the bureau will have to prove it!

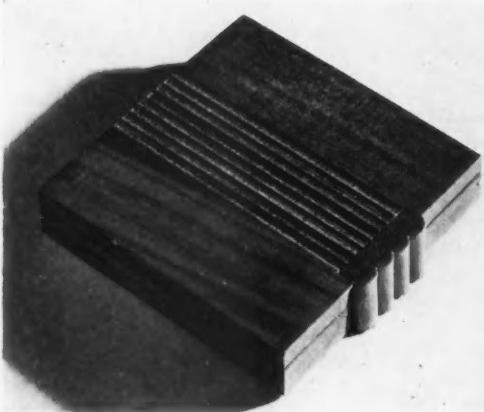
MANPOWER COMMISSION NOTE

Somebody insisted that the reason the F. T. C. wanted demonstrators conserved, was that the dear things could work on ammunition or electrical orders. Not any demonstrator I ever saw. One of my pet peeves with the manpower commission is that it has absolutely no sense of humor. I frequently ride in the 10 East 40th Street elevators. Old needlework em-

(Continued on page 52)

Packaging

PORTFOLIO



LENTHÉRIC: Smart and tailored is this new vanity. The grain of wood, the simple grooved center panel and the classic gilded catch with scalloped edge give it that "trim" appearance. A felt-padded well containing sifter and puff faces an ample round mirror on the inside cover.



HOUSE OF GORDON: A new packaging twist is introduced in Skipper Gordon's after shave lotion. Stout, fine mesh, fish net, fashioned into a neat covering for the bottle, presents the unusual effect. The bottle is topped with a natural grain wood cap. Skipper Gordon is made with French imported oils and aromatics.

ELIZABETH ARDEN: A new color harmony is introduced to fit the latest color fashions. To complement Paradise Pink powder, a lipstick, rouge and a nail polish have been created. A complete new daytime make-up sequence which uses a darker powder with a lighter lipstick.

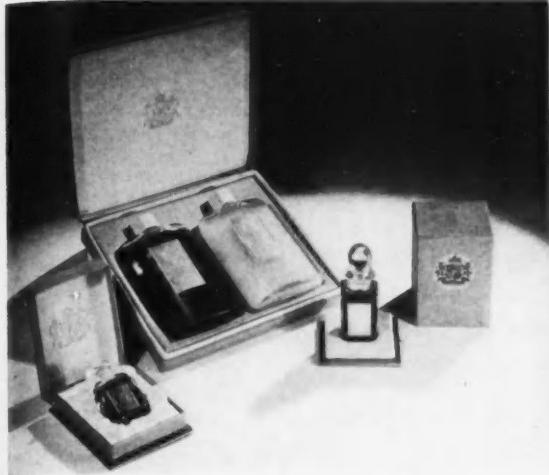


ROYCEMORE: A gift combination of two popular items in the Caribbean series—toilet water and shower soap. The bath set is packaged in a colorful box having a Latin-American motif, characteristic of all the items in the Caribbean line.



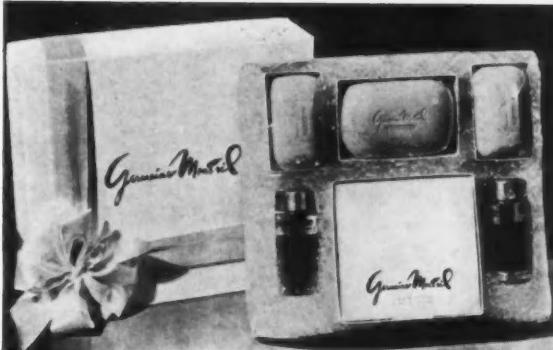
ANITA OF PARIS: Demand for perfume matching the Queen's Own line brought about the new Queen's Own Perfume, which comes in three sizes. It is packaged in a tan colored velour paper box stamped in gold and blue. The Eau de Toilette and Skin Freshener as shown is one of the new gift sets. The box is covered with tan velour

paper and stamped in gold and blue. Wild Flowers Eau de Cologne is now repackaged in a cream buff paper box with an embossed crest; the Wild Flowers Eau de Toilette is packaged in a red velour paper covered box. Economy packages of Eau de Toilette and Eau de Cologne are now on the market and are packed in velour paper set up boxes.



L'AIGLON PERFUMES: A four-ounce bottle of Russian Leather and Lily of the Valley will be an unusual gift combination set packaged in a gold engraved folding box. It will bear the inscription "Merry Christmas Dear Parents," the idea being to have a suitable gift for father and mother in one package.

GERMAINE MONTEIL: This new bath set contains everything for the bath—two cakes of complexion soap, large cake of bath soap, dusting powder, Bouquet Cologne and bath oil. It is packaged in sparkling cellophane and tied with white satin. The soap is delicately scented with Gardenia or Bouquet.



JOHN FREDERICS: Golden Arrow adds several new items to its cosmetic line. "Good Day" foundation cream, which comes in light, medium and dark; "Good Night" beautifying cream; cleansing cream; and creamy lipstick which comes in five different shades. The creams are captured in stiletto gray jars; the lipsticks in plastic containers.

(Continued from page 49)
ployees complain constantly that they are told to learn another trade. How silly to tell an old tailor who has



The W. M. C. has no sense of humor

spent his fifty or sixty mature years at custom tailoring that he should learn to operate a drill press! And the same holds true of the cosmetic demonstrators. It would take a better imagination than mine to imagine them reconverted. Theoretically, yes. Practically, no. . . .

STEARIC ACID SHORT

Mr. Bye, president of M. W. Parsons Imports, confirms the fact that both beeswax and stearic acid are short. That means trouble for shaving and vanishing creams. Lanolin, he notes, is again on the acute shortage list. That was bad news for many consumers who need the rich creams after blood doping. On these items please get your orders placed as far in advance as possible.

Mineral waxes, on the other hand, are adequate in supply, with mineral oils and most vegetable oils being much freer than they were.

ROMANTIC ISLANDS

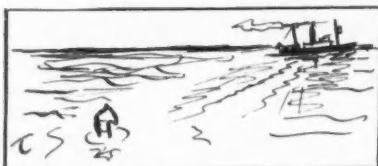
Used as the toiletries trade is to the sound of far-off island names, the war news must give them a thrill as they find one island after another, which has previously been only a trade-name, come into news prominence. Mr. Reiss, head chemist of Van Ameringen-Haebler, Inc., was recently pleased by a large delivery of scarce oils. Ninety thousand pounds of bergamot oil from the famed trees of Reggio Calabria. This oil, however, is not this year's extraction but is oil which has been stashed away until the Germans left. So, the question of the present condition of



Business done, enjoy your turkey dinner

the famous trees goes unanswered. We can only keep our fingers crossed that the war fought over their heads has not damaged too many of them. The income from that wonderful oil will mean a great deal to the Italians in that section as they rebuild their economic structure.

Consulting my map, after a talk with Mr. Reiss, I found that the vetiver and geranium oils which he had



Current shipments of precious oils

received from Reunion had started from a little island in the Indian Ocean, not far from Madagascar which you'll find on the map to the



More boxes for the spring trade

right of Africa with the Tropic of Capricorn running through the lower quarter. Toiletries, as well as war, teaches geography!

Lemon oil from Sicily and ylang-ylang oil from Madagascar completes Mr. Reiss' current shipments. But how he laments the loss of that twelve million dollar shipment of oils and vanilla beans from Madagascar and the Reunion Islands.

The loss to the perfume trade is acute. How many bottles of fragrance for milady was lost thereby is a real exercise in higher mathematics. The Treasury Dept. must sorely bewail every such loss!

A BOW TO THE JONESES

The Joneses and the Smiths always do an outstanding job because they feel competition is so acute from the name. Actually the names Moore and Robinson lead numerically. But the other two names have the spur of repetition. A current leader in the field is Richard Jones of Parfums Lelong; for the fine windows, a special bouquet from this department.

I am particularly pleased with these windows because they carry out

a particular fetish of mine. Perfumes need to be dramatized, publicized and glamorized. Why, just because every vial of perfume sells which is on dis-



Texas air most invigorating

play, should the toiletries houses lay down on the job of publicity, glamorizing, etc.? Eventually, the war will end. Which houses will stay in business? Those whose names and the names of the products have been dinned into the public's ears!

Many thanks to Mr. Jones for a particularly fine job. . . .

PERFUME NAMES

Twilight on the Desert, Sorocco, Tailspin—good names all. But a few other houses need a severe scolding for unusually poor names. Perfumes, rouge and nail polishes should have good-selling names, yes. But, please, not names in bad taste which will eventually hurt the industry as a whole. What I'm complaining about is months old, was advertised and dropped. But the reaction was so poor, from the public, that I'm hoping the offense will never be repeated.

THE TEXAS AIR

Just back from a trip to Dallas and Fort Worth, Texas. The girls are so beautiful, clean-cut and vigorous, everyone is so hospitable and the stores so well merchandised, that my wife objected seriously to my raving about them. Maybe it's the Texas air which accounts for the beautiful girls. But the air wouldn't account for the excellent merchandising in the stores. Or would it?

Special bouquets to the cosmetic buyers, display heads and merchandise men of both cities. You don't expect me to take sides in that feud between Dallas and Fort Worth, do you?

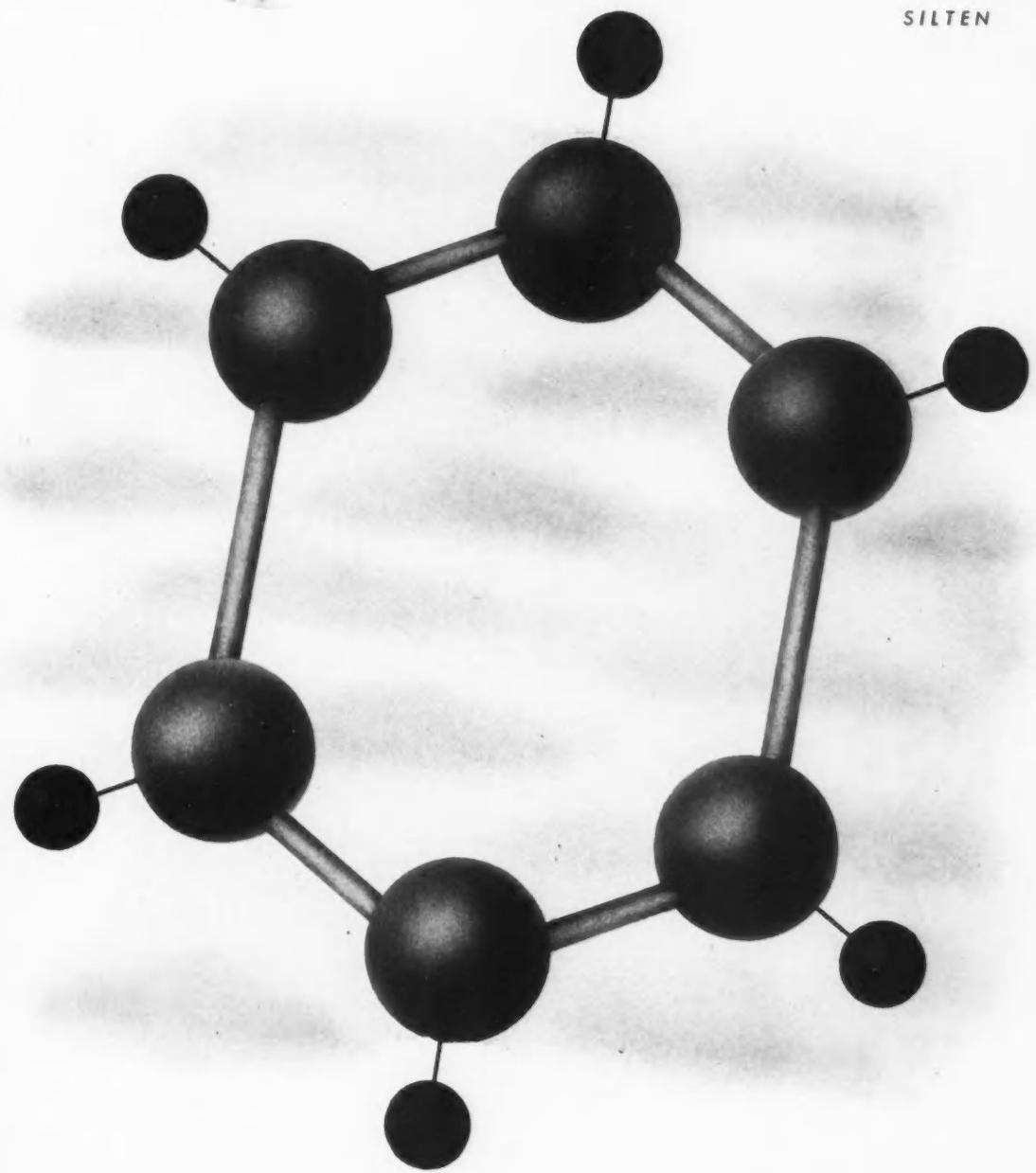
And a particular bow to their keen advertising departments.

FRENCH NOTES

Now that France is in the picture again, let's keep our advertising peppy and our products priced in the medium-price range. And, please,

(Continued on page 57)

SILTEN



Iso Bergamone

the scientifically developed synthetic Bergamot oil

POLAK & SCHWARZ INC. 667 WASHINGTON ST., NEW YORK, N.Y.

In its laboratory Givaudan helps to solve many of the deodorant and reodorant problems that confront manufacturers in many fields... from cosmetics, soaps, etc. to paint, printing inks, rubber, paper and textiles.



A rigid control is exercised by analyses and olfactory examination of all raw materials and finished products... an additional safeguard of Givaudan quality. Givaudan has developed many special materials which have increased the scope and efficiency of cosmetics and toiletries. Among these are such products as Musc Cibata, Cetyl Alcohol, Sunburn Preventives and many others.



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THE CHALLENGE OF TOMORROW...

THROUGH GIVAUDAN RESEARCH

As the military demands for materials normally used in the perfume, cosmetic and soap industries level off, more and more opportunities are being offered to manufacturers for construction planning of postwar products.

To these manufacturers Givaudan offers the full cooperation of its research laboratories. If you have special aromatic or perfuming problems, or if you need assistance in planning new products—or whole new lines of cosmetics—you will find Givaudan ready, willing and able to give you a helping hand.

Illustrated here are a few of the up-to-the-minute facilities at your disposal.

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GRASSE, FRANCE

PILAR FRERES

ANTOINE CHIRIS, LTD., LONDON, ENGLAND

(Continued from page 52)
don't compete with the other fellow just for the sake of adding a new item to the line.

PURCHASING

Exceptional job is done by Mr. Reimer, purchasing head of Lehn and Fink for the Dorothy Gray line. One of the great executives of the entire trade, he rates a whole roomful of bouquets. Looking far ahead, he evaluates the trends, purchases carefully and painstakingly.

Mr. Duncan, in the sales end, doesn't believe their firm will ever splurge into too many products which is the temptation of a number of houses facing competition from unknowns. Lehn and Fink have executives who keep their heads on their shoulders, as I reminded Mr. Duncan.

It takes long experience to see a bunch of new houses flood the market with new products and say firmly, I shall stick to my own line and only add what new products I am ready to market. So more power to Lehn and Fink and a roomful of bouquets to their fine executives.

POST-WAR PICTURE

Don't plan to market any product until you have pounded on the new name in advertising, radio, newspaper and magazine; do good counter displays, counter cards and booklets. Don't forget a good package is necessary and look at the package with post-war, not war-stringency eyes.

BEST RELEASE

This month's award for the best press release which will be widest used, goes to Revlon for the excellent story on Hawaiian interest in cosmetics, as reported by the Revlon representative in Honolulu, Mr. Crockett. Appointments for beauty treatments are made weeks in advance and all toiletry sales have zoomed. Proving, as I have always contended, that cosmetics are a foundation-stone in morale!

Everything has eased, excepting



Read out-of-town newspapers frequently

yellow, which will be short as long as the pull is so great for khaki. Man-power shortage is acute in this field as in so many supplier lines.

Our good friend Mr. Ebert, of Interstate Color, got fed up with business-pressure and has gone hunting for a week-end. We recommended vitamins as being safer than a bunch of new hunters in the woods. Good

hunting, Mr. Ebert, and a big bouquet to a fine gentleman who has always turned in a first-rate job.

ORDERS

Like Mr. Ebert, do a good job and get your orders for your spring needs into the suppliers' hands! . . . Then your Thanksgiving turkey will rest easily. Have a good holiday.

Talc Goes to War

DEMANDS of the U. S. Army Signal Corps for further research in the field of insulation have had the curious result of taking talcum powder to war against the Axis. Industry calls the product steatite, but it is a mineral twin sister to ordinary face powder of the boudoir variety. Both are kaolin talc and come from the same non-metallic mineral, which is itself called steatite, or popularly, soapstone.

Steatite has yielded to new and ingenious manufacturing processes, and production problems have been largely solved in the last twelve months, permitting its adaptation to more and more uses. It can now be baked into intricate forms and shapes, some of them so tiny as to seem almost microscopic. Tubes of steatite, for instance, can be made as thin as an ordinary shingle nail, yet capable of having thinner wire inserted. It can be bent at the sharpest angles and formed into geometric-looking patterns, yet it is hard and enduring, not attacked by acids and not injuriously affected by intense heat. It even retains its clear color when subjected to fire.

One of the chief sources of raw steatite, of the type needed for insulating equipment, was the Italian island of Sardinia, and when Italy attacked France in June, 1940, this source was sharply cut off. Adequate supplies have since been developed in the United States, particularly in Alabama, North Carolina and Virginia, but it is an interesting fact that when Sardinia was retaken by the Allied armies, one of the first shipments from it to this country consisted of a cargo of kaolin talc.

There are many varieties of steatite but all are extremely soft and "soapy." Ordinary soapstone has long had important household uses, since it is easy to work and it hardens

quickly when exposed to the air. It has even been used for large buildings. The finest cathedral in Scandinavia, the famous Dom of Trondhjem, Norway, is made entirely of bluish steatite (soapstone) from the nearby Gudbrandsdal, and it gives forth a luminous and almost pearly sheen.

From ancient times steatite has been known and worked. Pliny called it "a stone resembling fat." Other Romans called it "Stella Terreæ" (Earthstar), and old German writers called it "Katzensilber." In Cornwall, where it abounds, it is called "soap rock," and because of its many household uses it is often called potstone. Its powers of resistance to heat, acids and the attacks of the elements are remarkable in a mineral which is so soft in its natural state within the earth. Its uses are extremely varied, from face powder to boiler and steampipe coverings, and from tailors' crayon to dynamite, but it remained for the U. S. Army Signal Corps to demand of steatite "one more effort" to help win the war on the communications front. Steatite has met the challenge in a way that no other ceramic material has matched.

A recent survey conducted by the *American Home* magazine produced the finding that shade is the most important factor in the selection of some cosmetics.

Of the 1,897 who replied to the questionnaire the proportion of causes for the purchase of certain items were: lipstick, 65 per cent shade, 35 per cent texture, 43 per cent permanency, 5 per cent price, and 16 per cent brand. In buying face powder, 67 per cent looked for shade, 54 per cent texture, 32 per cent permanency, 7 per cent price, and 22 per cent brand.

TEST THIS NEW AND IMPROVED PRODUCT

DOW PROPYLENE GLYCOL, N.F.

IT'S READY TO SERVE YOU WELL

Recently perfected by Dow research, the new Propylene Glycol possesses excellent characteristics of odor and taste. Its purity makes it exceptionally well suited to use in many products taken orally—and to a variety of other formulations requiring high standards. To insure the same high state of product purity on arrival as when it leaves the manufacturer, Dow has developed a new, distinctive container—resin-lined to eliminate contact with metal. Propylene Glycol is a clear, colorless, viscous liquid with a faintly sweet odor and taste. It is miscible with a wide range of solvents: water, chloroform, acetone, alcohol, and many other organic liquids; and it acts as a mutual solvent for oil-soluble and water-soluble materials. The new Dow Propylene Glycol is ready to serve, and serve well, the manufacturer who can reap the benefits afforded by its unique properties as a combination preservative, flavor extender, plasticizer, and hygroscopic, softening and moistening agent.

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Interesting, Factual Data

Data that may well suggest profitable applications for Dow Propylene Glycol in your business are contained in a special Dow booklet. Physical data, charts and other technical information are also included in this booklet. Dow will be glad to send you a copy.



TO THE COSMETIC INDUSTRY

Dow Propylene Glycol, N.F., offers characteristics of purity and quality which make it especially valuable as a penetrant, soothing and softening agent, and as a mutual solvent for use in lotions, water creams, liquid face powders, jellies, lip rouge, nail polishes and other cosmetic products. As a humectant, emollient, solvent, carrier, and preservative, this Dow product is ready to serve in a variety of applications.



F Flavors

Vanilla Flavorings

Englis and Hanahan of Noyes Chemical Laboratory, University of Illinois, have disclosed their improved method for the analyses of genuine and imitation vanilla extracts. It involves a dilution, precipitation with lead acetate, extraction with ethyl ether, and dilution of the ether extract to a large volume with water. The quantity of total vanillin and coumarin in the solution is estimated from the ultra-violet absorption at 2875 Angstrom units as revealed by the spectograph, and the quantity of each of these flavoring agents separately is derived from a simple equation involving values at 2313 A.

The method is claimed to be both rapid and convenient, with results readily reproducible. Tests with mixtures of known composition indicate good accuracy. For pure vanilla extracts a slightly modified and simpler procedure is used which does not require ether extraction.—*Industrial & Engineering Chemistry*.

Ice Cream Non-Fat Solids

During the latter part of October there was a meeting of the Ice Cream Industry's Advisory Committee in Washington, which was held to discuss recommended changes in War Food Order 8, the ice cream limitation order. Suggestions had been made designed to allow a greater use of non-fat milk solids in the manufacture of frozen dairy foods. The consensus of opinion among the Committee was that no step should be taken to permit the carrying out of the suggestion until it was certain that a relaxation of regulations would not be detrimental to the war effort.

As a whole, the ice cream industry is in accord in being well satisfied with the present order. The suggestions for the amendment were made primarily because when the order was written the supply of milk-solids-non-fat was as tight as the sup-

ply of fat. Now, solids-non-fat are in good supply.

Cortizas Organizes Company

M. Cortizas & Co. is the new name of the company organized by Michael Cortizas, 731-733 Arch St., Philadelphia, Pa., with A. Trueba, one of the best known curers of vanilla beans in Mexico for over a decade. Mr. Cortizas himself is well known throughout the vanilla industry with which he has been con-

nected for 32 years. He was first associated with H. Marquadt & Co., Inc., pioneers in importing vanilla beans to the United States. He left this concern in 1919 and in 1920 was the first man experienced in the vanilla bean industry to go from the United States to Madagascar. Since that time he has been importing both Bourbon and Mexican vanilla beans. He was associated with Limbert & Co., Philadelphia, Pa., until 1936 when he organized the M. Cortizas Co. which was recently reorganized with Mr. Cortizas and Mr. Trueba as the directing heads of the concern.

Alfredo Trueba founded the house of A. Trueba Y Cia in 1909 and since then his method of curing has become known all over the world. At the present time his company is doing business as in the past and its vanilla will be handled exclusively by M. Cortizas & Co.

Beans on the Way

From forty to sixty per cent of the total amount of vanilla beans that had been purchased in Madagascar to replace those that had been lost while en route to the United States

are reported afloat. The balance was to have been shipped last week. Because of the exceedingly tight position on spot, the first half of the shipment will immediately go into consuming channels. Outside of a few limited quantities of cut beans, the spot market is virtually bare of any Mexican beans. The coming crop of Mexican beans may prove considerably smaller than earlier estimates because of recent severe storms.

Argentina Mint Oil

Moderate quantities of mint oil are being produced in the Mendoza and Rio Negro regions by Argentina.

Artificial Cinnamon

The scarcity of true cinnamon has resulted in an extensive business in cinnamon substitutes, powders prepared from various flours and inert materials to which a cinnamon-like odor and flavor has been added. Often relied on as the flavoring agent is cinnamaldehyde.

Cinnamaldehyde is now reported to be highly undesirable as a substitute for natural cinnamon oil in the fabrication of these preparations (*Kiserleti Kozlemények* 44, 179-81) because of its ready oxidation on exposure to air. A thin layer of cinnamaldehyde was found to have lost 8-14 per cent of its original weight during one year's storage. Stored for a year in 2 per cent concentration with powdered sugar, the loss was only 0.4 per cent but most of the characteristic odor disappeared and the odor of the benzyl radical was distinctly identifiable.

Natural oil of cinnamon is stable under these conditions owing to the presence of eugenol which acts as an antioxidant. To differentiate between natural and artificial cinnamon oil preparations, it is necessary to determine cinnamaldehyde and ether-soluble oil content.—*Food Materials & Equipment*.



PENN-DRAKE PETROLATUM

for cosmetics

used in making cleansing creams, astringents, pomades and many other products.

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an important ingredient of salves, ointments, suppositories and many other preparations.

In both classes of products, where Purity and Dependability of petrolatum are required.



Refined from Nature's finest Crude

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Penn-Drake Petrolatum is refined from the finest Pennsylvania crude, through a carefully controlled process that provides correct viscosity for the individual product, maintains desirable resistance to oxidation, eliminates undesirable taste or odor and assures smooth blending qualities.

Valuable information on how Penn-Drake Petrolatums improve the quality of your product supplied on request. Write today.

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Makers White Oils (U. S. P. and Technical) Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Odor-Free and other Naphthas; Petroleum Sulphonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils, and other petroleum products.

Alcohol Drawback

"There may be some misunderstanding in regard to the matter of keeping records, in view of the recent amendment of the law, effective April 1, 1944, eliminating the necessity for sale or transfer of the products in order to claim the drawback. The change does not eliminate the necessity for keeping records of sales. Such records must still be kept, and must be retained by the manufacturer for at least three years, as provided in Article VI, Secs. 197.30-32, Regs. 29 (1942 Ed.). These provisions are not affected by the new law, and they were not repealed or altered by T.D. 5338 amending the regulations to carry out the new law. The reason for this is, that the use of the alcohol must still be non-beverage, and sales of the products must conceivably have some bearing in establishing their use, which is the fundamental consideration upon which the drawback is granted. These regulations do not, however, and never did, require the keeping of a separate record of sales, nor any particular form of record, nor the making of any take-off of sales. It was, and is, sufficient if the data specified in the regulations are contained in the regular and ordinary commercial records of the manufacturer and can reasonably be ascertained therefrom by the inspector of the Alcohol Tax Unit for himself. While the record of sales must still be kept, the data need no longer be submitted with or in support of the drawback claim, with respect to products manufactured before April 1st and still on hand on that date, nor with respect to alcohol used on or after that date. As all responsible pharmaceutical manufacturers undoubtedly keep records of the sales and deliveries of their products to their customers in the regular course of business, there should be no real hardship or inconvenience in complying with the regulations in respect to sales records. The amendment to the law was not intended to eliminate the keeping of such records, but to change the basis of the claim from sale to use, and every manufacturer in the industry stands to accumulate substantial benefits from that change."

Cocoa Situation in Cuba

Cocoa exports from Cuba in 1943 were by far the largest on record, and reached a value of \$810,100. Most of the crop was shipped to the United States as sweetened chocolate. The large shipments virtually exhausted the cocoa bean stocks, and resulted in high prices to growers.

Ordinarily cocoa production in Cuba is about 5,000,000 pounds, which is about the amount consumed domestically. In 1943 local consumption dropped somewhat due to the large exports. The unusually high export figure was reached through the decrease in local consumption and through the use of a carry over from the previous year.

Thus far in 1944 growers have been unable to meet the demand because of depleted stocks at the first of the year, and the small spring crop.

Cubans are accustomed to a sweet chocolate, the preparation of which requires the addition of cocoa butter. A small amount of cocoa is pressed to produce this cocoa butter, although cocoa cake and powder do not have a good market in the local market. This taste habit accounts for the small exports of cocoa cake and cocoa powder.

Ordinarily Cuba receives little revenue from the export of cocoa, but in 1943 an exceptionally profitable market developed in the United States for chocolate. Exports of

Michael Cortizas

*is happy to announce that he
has formed a new company
known as*

M. CORTIZAS AND COMPANY

with offices and warehouse at

731-733 ARCH STREET, PHILADELPHIA, PA.

*and will carry on the importation of all
varieties of vanilla beans as in the past.*

We thank you for your previous patronage and trust we can continue to count you among our friends in the future.

chocolate amounted to 1,200,000 kilograms for the year, but as the sugar content was approximately 50 per cent, the true weight of cocoa was about half that given.

Exports of cocoa amounted to 118,054 kilograms. This was largely obtained as a by-product in obtaining cocoa butter to be used in sweet chocolate.

Imports of cocoa products during the year 1943 amounted to \$8,406.

Normally Cuba is not a cocoa exporting country, and its high tariff discourages imports, which results in price levels ordinarily above those of the rest of the world. During 1943 the differential became very large when the price of cocoa more than doubled.

Since that time prices have remained at a high level. The high purchasing power of the population, and the short supply of cocoa support these high prices, believed to be the highest of any producer nation, and considerably higher than prices in the United States.

French Oceania Vanilla

The available war export tax on vanilla beans, which was at the rate of 37 cents per pound, has been annulled in French Oceania. In its place an ad valorem tax of 5 per cent of the export value, f.o.b. Papeete has been put in operation.

A further tax has been imposed for the encouragement of the producer. It provides profits of 10 and 5 per cent respectively to exporters and driers, over and above expenses. Thus, a profit of 15 per cent is paid to dealers in the colony, with all the balance taken as the vanilla defense tax. The new ad valorem and defense taxes will remain in effect for nine months after the end of the war.

Shortages in Strawberries, Raspberries and Cherries

FLAVOR manufacturers faced with the present shortages in fruit will find a solution of their problems with

Imitation Strawberry No. 21

Imitation Raspberry No. 75

Imitation Cherry No. 105

These useful products may be used to augment natural fruit flavors, to create greater strength or to stretch the effectiveness of natural flavor, or—they may be used with success just as they are without any additions.

*Write for working samples
and full information.*

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Sugar Prospects for 1945

"Sugar prospects for 1945 indicate that with careful use by consumers all essential requirements can be met both for the household and for industry. A limited amount can also be provided for relief needs as well as the requirements of our allies. It is anticipated that the Cuban 1945 production will be significantly below the 1944 level, and that prospects in Hawaii and Puerto Rico will improve. In late 1943 and early 1944 Puerto Rico suffered one of the most severe droughts in its history. Instead of a million tons, only 725,000 tons were produced. Price-support programs have been announced for the continental areas, which should have the effect of increasing the 1945 production.

Requirements of the liberated European areas which normally have been filled from Cuba and in part from Java will have to be met. Little is currently known of the 1944 harvest prospect for beet sugar in Europe. The extent of the European need for cane sugar grown in the tropics cannot be appraised until more information of production conditions in Europe is received. Nor is it safe to assume that relief will come from the Philippines or Java during 1945. It is expected, however, that there will be a sufficient supply of grain so that even though industrial alcohol made from invert molasses costs only about half as much as when made from grain, no sugar or only small quantities will have to be put to this use. This action will more than offset the estimated decline in Cuban production."

The above stand, as taken by the War Food Administration, has resulted in a controversy of consider-

able means between sugar brokers and distillers, each of which is taking a position to his own advantage on the question of which shall be the source of alcohol, grain or sugar. Industrial alcohol manufacturers on the East Coast are presenting a case that if forced to convert their facilities to the manufacture of alcohol from grain their costs in this production would double, and would result in a smaller yield. They further contend that the yield would be 25 per cent less than that from sugar, and that 40 per cent more labor would be required. They take the position that there is ample sugar for requirements. On the other hand, there are rumors to the effect that sugar brokers are behind the idea of a change over to grain for alcohol production in order to permit them more sugar for industrial and civilian consumption.

Grenada, BWI, Cocoa

Cocoa production for the 1944 season in Grenada, BWI, will come to about 3,300 tons, which is about the same as last year's crop. Exports will be higher, however, as there was quite a carry-over from last year.

Anticipated China Sugar

The Farmers Bank of China has earmarked CN\$50,000,000, it is reported, for a scheme to increase the production of sugar in Kwangsi, south China. The Sugar Monopoly Bureau for Kwangtung and Kwangsi has secured a loan from the Kweilin Branch of the bank for the purpose of increasing sugar production in eleven districts. The credit will be used to purchase, store, transport, and sell on a wholesale basis.

Camax Co. Organized

The Camax Co. is the new name of the old M. Cortizas Co., Philadelphia, Pa., importers of vanilla

beans, which has been reorganized with Joseph R. Maxwell as president. The principal owner, who is also the chief source of supply of Mexican vanilla beans, remains the same. The plant and offices will be continued at 1316 Arch St.

Mr. Maxwell is primarily a food technologist and a specialist in flavors. He resigned as chief chemist of Stephen F. Whitman & Sons, Inc., to head the reorganized concern. He was with the Whitman Co. about 25 years where he acquired a wide experience in the setting up of standards for many foods, flavors and other ingredients used in chocolates, confections and soda fountain specialties. He has twice made extensive studies of raw material sources in Mexico, South America, England and France. It was in this capacity that he became further interested in the growth, cultivation, curing and processing of vanilla beans and improvement of their quality.

Mr. Maxwell is a graduate of the University of Pennsylvania and of advanced technical courses in the chemistry of foods at Massachusetts Institute of Technology. He is a member of the Society of Food Technologists and the American Chemical Society and has served on the Technical Research Committee of the National Confectioners Association.

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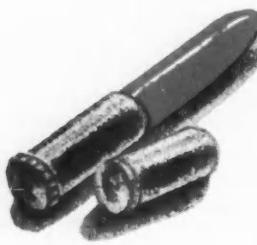
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*That's why we take pride in our products, which
is reflected in their quality uniformity.*



*For post-war, our consistent
research already assures cosmetics and
specialties that will set even
higher standards tomorrow.*

*NOW is the time to plan for the
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Laundering on the High Seas



Official photograph, U. S. N.
Typical sea-going laundry helping to win the fight

ABOARD a Coast Guard-manned attack transport, somewhere in the Pacific, approximately five hundred towels, five hundred sheets, six hundred and fifty trousers, nine hundred and eighty shirts and over two thousand socks is only part of the enormous family wash turned out each week by the ship's laundry aboard this warship.

Six men, all Coast Guard seamen, work an average of eleven hours a day to deliver this king-sized bundle. Their schedule is: All officers' and crew's clothing washed in at least ten days. With the limited space and the natural hazards of a laundry afloat, that's a tough schedule to stick to, but the laundry men not only do an efficient job, but an amazingly fast one.

Located in the furthest aft compartment of this large transport, the laundry is directly over the propeller shaft. During rough weather, the going is pretty rugged. Ordinarily,

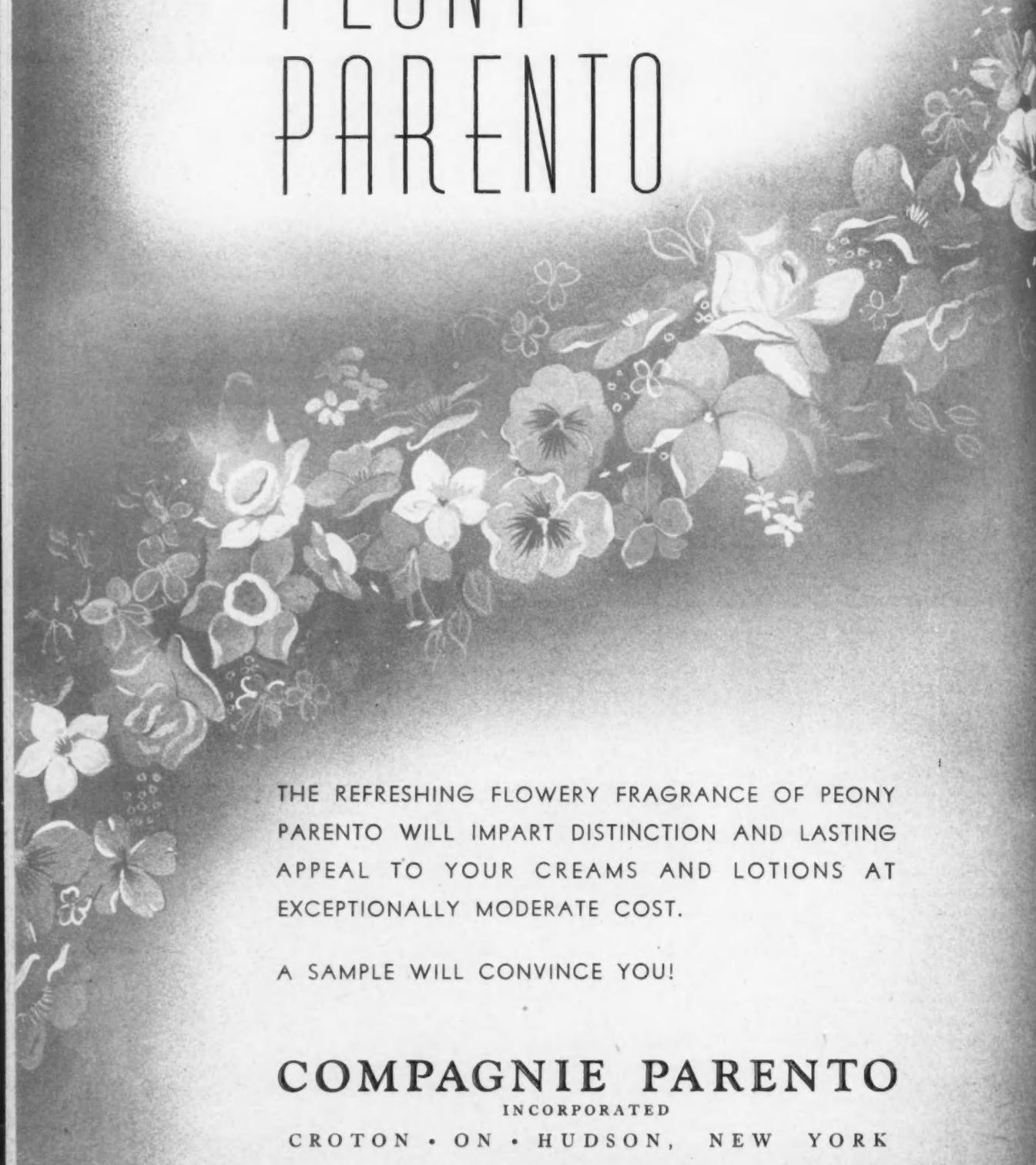
the temperature averages around 90 deg. F. and when the blowers are off, which they always are during battle conditions, the thermometer soars over a hundred. Because of the heat



Official photograph, U. S. N.
Danger of enemy action makes laundering a difficult task

(Reprinted from *Laundryman*, August, 1943)

PEONY PARENTO



THE REFRESHING FLOWERY FRAGRANCE OF PEONY
PARENTO WILL IMPART DISTINCTION AND LASTING
APPEAL TO YOUR CREAMS AND LOTIONS AT
EXCEPTIONALLY MODERATE COST.

A SAMPLE WILL CONVINCE YOU!

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Packaging Trends in Soap and Cosmetics

IN a survey prepared from questionnaires for the Post-War Planning Committee of the National Paper Box Manufacturers' Association, some packaging possibilities of unusual interest are anticipated. Findings are based on the assumption that the European war will be over in 1945.

It is estimated that retail trade, including toilet preparations, will come to \$1,676,000,000; estimated manufacturers' production will amount to \$892,000,000; and containers of all kinds will number 1,564,000,000. It is pointed out that since there is a certain amount of duplication on the part of manufacturers an absolute figure is impossible to estimate, but this duplication should not exceed 20 per cent.

Women represent the bulk of buyers of cosmetics, possibly 75 per cent, but soap consumption is more evenly consumed among men, women and children.

Approximately 90 per cent of the advertising to consumers is by radio and magazines for women. The large manufacturers are naturally the heaviest advertisers. Trade associations have sponsored various forms of publicity which will probably increase.

Approximately \$250,000,000 is spent for toilet preparations annually through barber shops, and another \$200,000,000 through beauty parlors.

Plastics have made great strides in this industry. However, not all are perfect, and just how far they will supplant the usual lines is problematical.

POST-WAR DEVELOPMENTS

One manufacturer believes that oriental perfumes will be in greater demand after the war as a result of the Pacific campaigns, and experiences in Asiatic countries and in the islands of the Pacific.

It seems to be indicated that there will be a rather heavy export demand for soap and cosmetics, and that packaging for this trade may need to be of a different type than the packages for domestic use.

A digest of outstanding points follows:

Most important developments following the war:

(a) Plastics in the manufacture of toilet articles.

(b) New automatic machinery for the manufacturing of soap specialties.

(c) Machine fabrication of wood for containers.

(d) Domestic production of many products formerly imported.

(e) New method of distilling or softening water.

New products in soaps and cosmetics:

(a) Most reports say few, if any.

(b) Some indication of new products for complexion purposes in extreme hot or cold weather. Result of experiences in war.

(c) Many new designs in toilet articles and many new materials introduced.

(d) Self-powdering powder puff.

Percentages of products for war use:

(a) In soaps approximately 27.6% of entire output—except in fancy toilet soaps.

(b) About 38.9% of men's regular toilet preparations.

(c) Other products range from 5% to 40%—average of all others about 11.6%.

Percentage and number of set-up boxes used:

(a) About 85% of all toilet soaps.

(b) Laundry soaps in corrugated or folded boxes—90%.

(c) Other cosmetics about 48% in some form of set-up box. Estimated number of set-up boxes used, approximately, 487 million. Total containers used including wood, plastic, glass, corrugated, etc., 1,264 million. Total value of manufactured products, \$892,000,000. Retail value, \$1,676,000,000.

Is greater or less volume expected after the war?

(a) A falling off of volume the first year after the war but a quick recovery thereafter.

How many years?

(a) A continued steady increase in volume for a period of 10 or 12 years.

Most outstanding war products generally:

(a) Electronics.

(b) Remarkable new chemical and medical products.

(c) Small automobiles and delivery cars using minimum of gas.

(d) Television.

(e) Solar heat.

Drastic changes in soap and cosmetics industry:

(a) Use of electronics for sorting and grading.

(b) New inspection methods for bottled liquids.

(c) Automatic control of tube and bottle filling machines.

(d) New micronizing and pulverizing machines.

Substitutes:

(a) Many glass containers will be retained, also plastic, but the expense will return this custom to the use of the paper box as originally.

Soap Shortages Outlined

At a recent meeting of the WFA Soap and Glycerin Industry Advisory Committee, U. S. Army representatives informed the soap manufacturing industry that for the six-month period beginning October 1, the Army would require three times the amount of yellow laundry soap that it had been currently receiving.

The increase requirement will cut deeply into civilian supplies since it is estimated that during the six months civilians will have available only a trifle more than half of the supply available during the previous period. The soap situation has eased since August, mainly because of cooler weather and a consequent decrease in demand.

There is a marked difference in the supply situation of toilet and bar soap. Almost the only shortage in toilet soap occurs in special brands, while in laundry bar soaps practically all brands are short.

In addition, yellow laundry soaps are scarcer than white soaps. Flakes and granules are short, with brands playing a large part. Washing powders of low soap content are in better supply as the demand for them is not so great.

Insofar as available supplies permit, the soap manufacturing industry is attempting to see that there is equitable distribution of the scarce soap products.

At the present time the shortages of laundry soaps and powders are probably being felt more seriously in the South than elsewhere.

**CINCINNATI
CRAFTSMEN
MAKE
WORLD-FAMOUS**

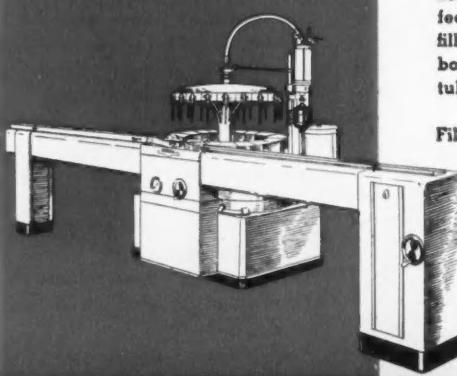
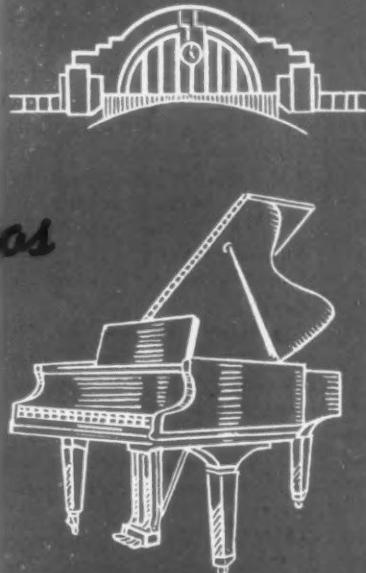
Pianos

Cincinnati craftsmen for 75 years have been making pianos of international fame, and thus have afforded millions of people the joy which only music can bring. Reason: a special skill possessed by those Cincinnati-born and Cincinnati-reared.

**CINCINNATI
CRAFTSMEN
MAKE
WORLD-FAMOUS**

Kiefer Filling Machines

Cincinnati is the acknowledged machine tool center of the world. The Karl Kiefer Machine Co. has always selected its men from available "Cincinnati grown" craftsmen, for the building of its high-speed, accurate bottling and packaging equipment. This explains why Kiefer machines have performed so well.



Completely automatic,
semi-automatic, hand-
fed equipment to clean,
fill, close, convey jars,
bottles, tins, collapsible
tubes.

Filters Pumps
Percolators

THE KARL KIEFER MACHINE CO.
CINCINNATI, U. S. A.

New York
Boston
Chicago

San Francisco
Seattle
Los Angeles

London, England

War Check List—Government Regulations

Digest of Federal rules and regulations on price control, allocations and other regulatory measures of cosmetic, soap and flavoring industries issued or proposed during the past month

Fats and Oils Order Revised

That portion of WFO 42 dealing with soap has been rewritten into a new order WFO 42b. This new order limits manufacturers and converters to a quota based on the base period of the calendar years 1940 and 1941. Quotas are percentages of this base period, and consist of 90 per cent in the case of package and bar soap, and 110 per cent in the case of bulk package soap. Restrictions apply by quarters. In addition to quota quantities manufacturers may use up to 10,000 pounds of fats and oils during a quarter, but are not permitted to carry over any unused portions to the next quarter. Manufacturers who do not use their entire quota may carry over unused portions to be used after the regular quota for the quarter is exhausted. But the fats and oils must be used in this succeeding quarter. The following classifications carry quota exemptions:

1. A manufacturer who used fats and oils in soap prior to July 1, 1943, may use 15,000 pounds per quarter. One who started this use after the date given is permitted 1,000 pounds per quarter.
2. Use in soap to be delivered to an exempt agency, the Veterans Administration, or under a laundering contract with an exempt agency or the Maritime Commission.
3. Export to Canada under license or to any other country pursuant to a license issued by F.E.A.
4. Use in abrasive hand soap, or soap for non-detergent purposes, or for the processing of textiles.
5. Use in soap for sale to soap converters for further processing.
6. Until March 31, 1945, the use of fish oil by any manufacturer provided that prior use of fish oil by the manufacturer during the base period must be excluded in determining base period use.

Fats and Oils Reports

An amendment to WFO 42-1 provides that persons who use 15,000 pounds of fats and oils during a calendar quarter must file reports with the Bureau of Census, using Form BM-1 for each month, to be

filed not later than the 15th of the following month, and Form BM-2 for the quarter, to be filed not later than the 15th of the second month following each quarter. Among others who are required to file under these conditions are manufacturers of pharmaceuticals; cosmetics and toilet preparations; resins and plastics (natural and synthetic); synthetic detergents, wetting and foaming agents; metallic soaps and driers; and chemical derivatives of fats and oils.

Ratings for Fibre Containers

The WPB has amended Preference Rating Order P-146 covering fibre shipping containers.

Product	Rating
Akali cleansers and washing compounds	AA-3
Cosmetics and toiletries	AA-5
Dentifrices	AA-3
Facial tissues	AA-3
Soap	AA-3

Container manufacturers are given the following ratings for products to be shipped to the toilet goods industry:

Product	Rating
Closures and hoods for containers not otherwise listed	AA-3
Collapsible tubes	AA-3
Fibre cans and tubes	AA-3
Folding and set-up boxes	AA-3
Glass containers	AA-3
Metal cans	AA-3
Paper caps for glass bottles and jars	AA-3

Cosmetics and toiletries may not be packed in fibre drums. Ratings for other products follow:

Product	Rating
Detergents—except straight pack or 100% mixture of trisodium pyro phosphate, soda ash or bicarbonate of soda	AA-3
Metallic soaps	AA-3
Peroxygen chemicals	AA-2
Soap, powdered, flaked, or paste, but not in cakes or bars	AA-3

Palm Oil Order Revoked

Since all palm oil imports are purchased by the Government, and allocations to critical users are made by WFA, War Food Order No. 38 is considered no longer necessary. It has been revoked.

Used Container Prices Increased

The OPA has increased the prices on secondhand shipping containers through a change in MPR-529. The new ceiling prices for secondhand fibre and corrugated containers are as follows:

Type of Container	Per cwt.
Repairable	\$2.25
Reusable or reconditioned—sorted by original user's name applicable to sales to the original user only	*4.75
Reusable or reconditioned—sorted by size—applicable to sales by dealers only	*5.00
Reusable or reconditioned—all other sales	3.00

*If the price per hundredweight or per thousand square feet translated into a price per container is less than 5c, the maximum price for each container in the shipment shall be 5c.

In addition to the above price basis, schedules are also open to price containers on square feet of area, and on the basis of the sum of the dimensions. These schedules are well in line with the above prices.

W.P.B. Orders Appeals

Priorities Regulation No. 16, which covers appeals from W.P.B. Orders has been changed. Appeals from the following orders shall be made to local field offices, and not in Washington:

L-20 Cellophane
M-19 Chlorine
M-30 Alcohol
M-154 Thermoplastics
M-241A Paper and paperboard
M-290 Containerboard

For other orders, which contain appeal clauses, appeals must be made where the order directs; where orders do not contain such clauses, appeals should be made to Appeals Routing Unit, W.P.B., Washington, D. C.

Oil of Wormseed Priced

Through MPR 472, Amdt. 5, ceiling prices have been established on oil of wormseed. The price is \$4.50 per pound for producers and \$4.72 for dealers.

JASMINE #1000

**The ideal substitute for the
absolute, containing all the
odoriferous constituents of
the fresh blossom.**

**Effective even in
minute quantities.**

**SCHIMMEL & CO. INC.
601 WEST 26TH STREET
NEW YORK I, N. Y.**

New Products, Ideas and Processes

Aluminum Foil for the Household

Reynolds household foil is thin, flexible aluminum. It will come in rolls and will pull out of packages, to be torn off in any desired length. Its makers claim for it that foods wrapped in it do not dry out or absorb moisture, do not take on or give out odors, and keep longer without changes in flavor, color and vitamin content. It will be available in the near future in retail outlets.

New Polyhydric Alcohol

Trimethylolpropane, a polyhydric alcohol, is now commercially available from the Heyden Chemical Corp. and has already found uses in making low viscosity drying and non-drying alkyd resins. It is also used in the manufacture of rosin esters and plasticizers. In general, it is stated, resins and oils made from trimethylolpropane show wider solvency and compatibility than corresponding compounds made with other polyhydric alcohols. Further information will be supplied on request.

Air Coolers

To meet the demand for cleanliness and attractive appearance in ceiling type horizontal coolers for cold rooms and large refrigerators a new series of Spasaver air coolers in streamlined white enamel cabinets ready for installation is offered by Drayer-Hanson, Inc.

Metal Conveyor Belts

Metal conveyor belts made by the Cyclone Fence Division of the American Steel & Iron Co. are adequately described and illustrated in a catalog just issued by the company, a copy of which is available to anyone on request.

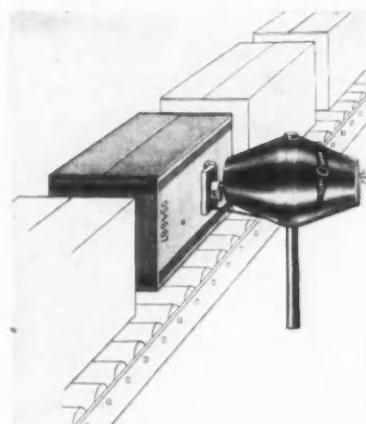
New Synthetic Resin

Monsanto Chemical Co. has announced a new synthetic resin, which will all but eliminate size as a restrictive factor in post-war plastics. Heretofore, using injection mold methods, costly and bulky machines have been necessary. In low pressure lamination these heavy machines are not required. In the Monsanto process a

fabric fitted to mold is impregnated with the resin, and is then baked for about ten minutes after the center of the lamination reaches the temperature of boiling water. Bright-colored fabrics may be made to show through transparent plastic. Thus the new plastic lends itself to the manufacture of luggage. It may also be used in wall panels, trailer bodies, fenders, boats, curved furniture, etc. The present output of the plastic is limited to war use.

Compact New Marking Device

Markomatic, marketed by Adolph Gottscho, Inc., is a versatile marking machine, complete in one unit. Its imprinting medium may be rubber



New marking device

die or rubber, steel, or brass, depending on the degree of hardness of the object to be marked. Its makers state that its kiss imprint is clear and unblurred, when it is used on objects moving at a speed of approximately less than 10 feet per minute. The units function when the object to be marked vary slightly in location, or may be used to make very carefully located imprints. Dies or type may be made interchangeable. Inking is automatic.

Sodium Methylate

Sodium methylate, a versatile reagent for organic synthesis, is now commercially available as the result of a process developed by the Mathieson Alkali Works. Heretofore, users of this product have had to prepare

it in solution as needed. The new product is a dry white powder containing "a minimum of 95% of sodium methylate, not over 2% of inorganic alkalis (sodium hydroxide and sodium carbonate) and not over 3% of methanol." It is packed in air-tight containers and is said to be stable as long as it is not exposed to air.

New Catalogs

The Pan American Society is offering free, a pamphlet which informs North Americans on how to change the endings for thousands of English words into Spanish. To obtain a copy, address: Pan American Society, Box 315, Quito, Ecuador, South America.

A new catalog covering the base features and applications of the Mikro-Pulverizer line has been issued by the Pulverizing Machinery Company. This forty-page catalog covers the Pulverizer line from the basic features of construction and design of every model through the applications of these machines in many phases of the chemical, pharmaceutical, cosmetic, food, plastics and other fields. Copies of the catalog will be sent upon request.

A bulletin on intimate blending of fine powders has recently been issued by Sprout, Waldron & Co. In addition to a description of Blending Systems designed for continuous, automatic operation, there is a page of photographs which show the difference between intimate blendings and conventional mixing as revealed by spatula tests. Copies of this bulletin may be obtained from the manufacturer.

W. B. Connor Engineering Corp., New York, N. Y., has released a 120 page book, "Air Conservation Engineering." The book contains reference data, tables of ventilation requirements, territorial climatic conditions, outdoor air heating and refrigeration loads, properties of gases and vapors and their safe concentration, psychrometric charts and data. Also included is a catalog section containing descriptions, illustrations, dimensional information and instructions for Dorex air recovery equipment.

WASHINGTON PANORAMA

by ARNOLD KRUCKMAN

THE thought uppermost in your minds, of course, is about the essential oils and other raw materials that may be available in France and elsewhere in liberated Europe, and what may be done to get some of the potential supplies into the United States; and how the business of getting authentic information and making purchases safely may be organized, and by whom. There are enough stories leaking out of France to raise the hope that there may be far more materials over there than any one knows. Lester A. Barber, Assistant Chief of the Drugs and Pharmaceutical Unit of the Bureau of Foreign and Domestic Commerce, in the Department of Commerce, who knows the stuff this industry needs, and who knows France, is of the opinion this whole question is chiefly a matter of conjecture because no one, at least in this country, has yet come into possession of any reliable information. He says the reports received have been contrary. One report indicates manufacture had virtually been suspended by the decision of perfumers to place their establishments at the disposal of the pharmaceutical and food industries. A later report, unconfirmed, asserted production had actually increased, and that all available oils had either been bought or requisitioned by the Germans. The French Embassy in Washington has requested a full report, but as is well known, France is still so disorganized, and communication is so chaotic between the various sections of France, that it has been almost impossible to obtain any reliable information about conditions and resources in the Gras country, and similar areas.

Barber stresses one point, that the harvesting of flower crops in France does not take place at any one time, but during various months, so that if

the fields have not been destroyed, crops maturing from August onward this year should become available to the United Nations. "If the report is true that the occupying Germans increased production of these oils," suggests Barber, "it is quite possible that the oils were forwarded to German-controlled factories in France and the French were able to divert or prevent their destruction; and there may even now be appreciable supplies for use by France and the Allied countries."

RECENT SHIPMENT OF BERGAMOT

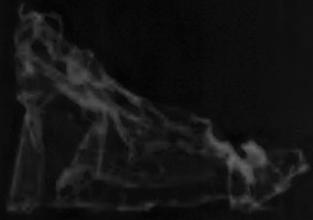
Bergamot, in passing, undoubtedly may be priced at \$5.00 and \$5.50, even though the British are presumed to get the same bergamot for something less than \$5.00 and something more than \$4.00. It is understood the informal agreement reached in New York between the FEA, OPA and the FEA Essential Oils Industry Advisory Committee (\$5.00 and \$5.50) has, as required, been approved by the Executive Committee of the U. S. Commercial Corporation, a subsidiary of FEA. The recent shipment from Italy totals somewhere between 90,000 and 100,000 pounds. The quantity is assumed to be sufficient for the needs of American users for from one to two years, even without synthetic bergamot. As is well known, it is the popular base for fractionating to make verbena and similar perfumes, used mostly in soaps. The general assumption is that the British dealers will probably procure approximately 400,000 pounds. It also is assumed that Italy will grow another large crop during the next year, and that we will get our share of the prospective crop.

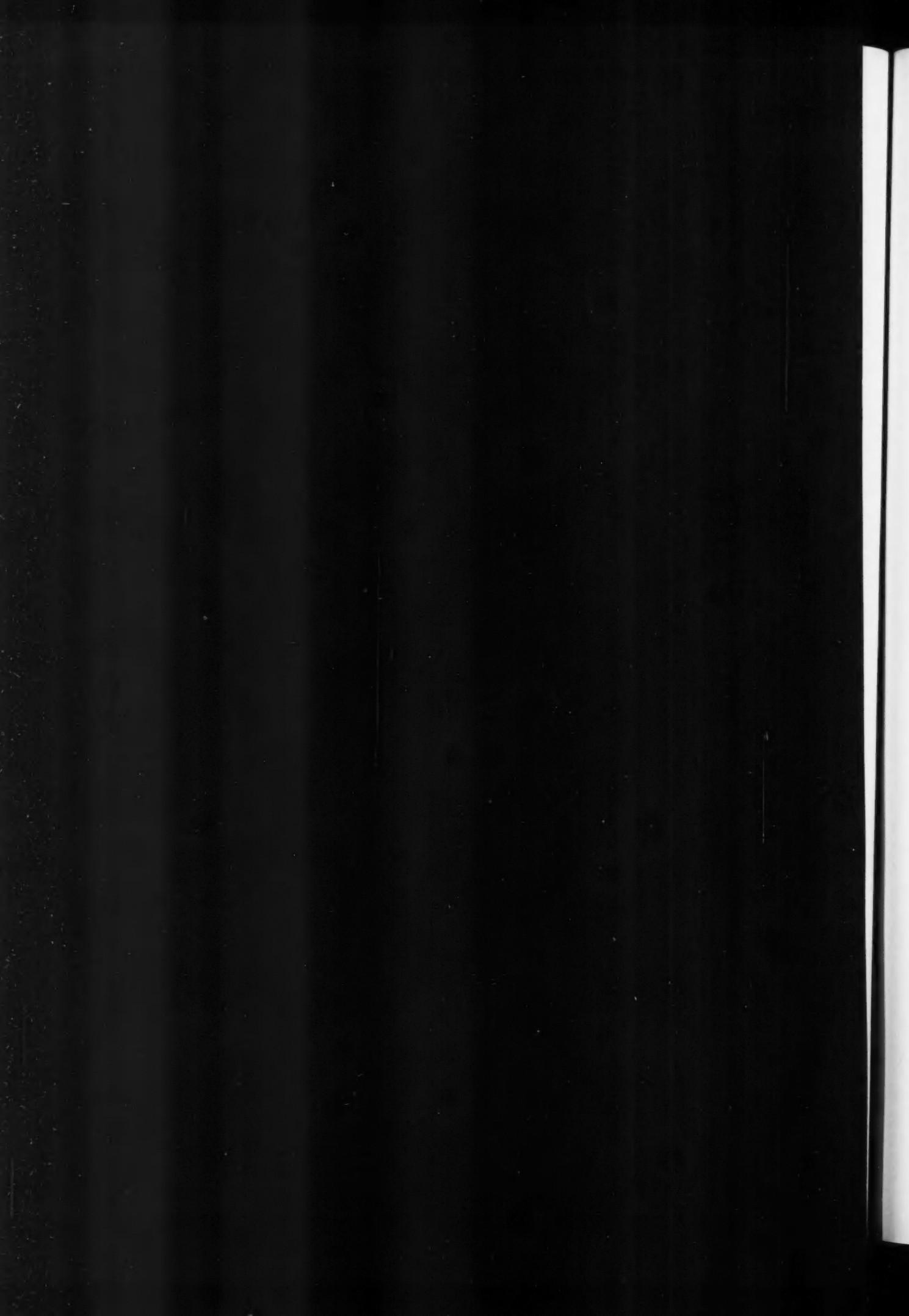
There is reason to hope early in November that the industry may receive an allocation of 75,000 pounds of lanolin for November and Decem-

ber. But no decisions have been made or announced, and it may be weeks before the announcement is made, if it is finally made. There also is sound reason to anticipate the announcement of an amendment to M-115, the collapsible tube regulation, which would remove the 75 per cent limitation for tubes made of lead, lined with 3 per cent tin. At present the tubes are lined with tin and with wax, the wax lining naturally being greatly in the majority. The present situation in some instances is a discrimination against the tubes which must be lined with tin. It is probable the removal of the limitation may make manufacture of some tin-lined tubes easier. But on the whole the advantage is expected to be psychological rather than physical. The facilities required to make tin-lined tubes are now almost wholly employed on war jobs. Those who wish to procure the tubes will be confronted with the task of finding the producer who can undertake the manufacturing job.

MORE ALCOHOL FOR TOILETRIES

Federal Reserve System late in October announced that beverage distilleries resumed production of alcohol for industrial purposes late in September, after turning out an exceptionally large amount of whiskey and other distilled spirits during August. The huge actual and potential crop of grain caused WFA to agree with some WPB officials that another whiskey-making "holiday" should be declared in November and December. This was expected to prompt the production of still more industrial alcohol. Additional industrial alcohol, it was assumed, would swell the volume available for the toiletries industry, since the synthetic rubber program is getting most of its alcohol from the petroleum industry. It





U.S.I. CHEMICAL NEWS

November ★

A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries

★ 1944

Non-Critical Resin Proves Practical for Variety of Jobs

S&W Aroplaz 1306 Performs Like a Modified Alkyd Resin



Introduced in the early part of this year as an alternate for critically scarce phthalic alkyd resins, S&W Aroplaz 1306 is now reported to be in successful use in a wide range of interior industrial coatings. The new resin is also proving practical in numerous architectural and exterior applications. Manufactured by a new process developed by U.S.I., "1306" contains no critical materials and is available without priority.

Color and Gloss

Initially very pale, the staining properties of "1306" are so slight that white enamels can be made approaching the whiteness obtained with alkyds, and color retention is excellent. In gloss and gloss-retention it is superior, in both clear and pigmented films, to many alkyds. It is also high in water- and alkali-resistance, and in flexibility.

SPECIFICATIONS — AROPLAZ 1306

	65% SOLIDS in MS	75% SOLIDS in MS
Acid Value (Plastic)	10.15	10.15
Color (G-H 1933)	7.9	7.9
Viscosity (G-H)	T-V	Y-Z1
Weight/Gallon at 25 C	7.7	7.9 lbs.

Metal-on-Plastic Plating Uses Alcoholic Solutions

According to claims set forth in a newly-granted patent, a metallic coating heavy enough to serve as a cathode for subsequent electroplating may be applied to plastic articles, such as buttons, costume jewelry, and so forth.

The plastic object to be plated is prepared by rolling it in sand to abrade the surface, immersing it in a ferrous sulphate bath and then one of copper sulphate. Next, the plastic article is treated in a bath of ethanol, water, sulphuric acid, quinol and stannous sulphate. Following this, comes a treatment in a bath of sodium hydroxide, silver nitrate and ammonia.

In order to cause a thin layer of silver to deposit from the silver nitrate upon the plastic articles, a reducing agent is added to the last bath. This reducing agent is composed of ethanol, sugar, nitric acid and water.

The metallic silver thus deposited is heavy enough to carry the subsequent electroplating current.

U.S.I. Announces New Pacific Coast Office

In order better to serve western industry, U.S.I. has opened a new Pacific Coast office in Los Angeles. This new office is to be the headquarters for the company's entire Pacific Coast operations, and will handle all sales and technical matters in the states of California, Oregon, Washington, Idaho, Nevada, Utah and Arizona.

The new office is to be in the charge of Mr. Robert E. Alexander, Pacific Coast Manager, while Mr. G. C. Dohm will serve as Manager of the Los Angeles Division. Mr. Henry M. Lindau will specialize in resin sales and will have his headquarters in San Francisco.

Address of the new office is 433 South Spring Street, Los Angeles 13.

Need Ethyl Acetate?

The most widely used fast-evaporating nitrocellulose solvent, ethyl acetate offers the advantages of low cost, strong solvent power and mild, pleasant, non-residual odor. With the availability situation undergoing continual change, it is quite possible that you can make wider use of this versatile solvent. U.S.I. will be glad to discuss the possibilities of filling your requirements.

Topsy Oysters Shed Shells in Record Time

Fish and Wildlife Service experiments point the way to more rapid shucking of oysters. In laboratory tests the oysters were soaked in carbonated water for five minutes.

The carbon dioxide intoxicated the bivalves to the point where the large muscle holding the shells closed relaxed and the oysters were easily opened. In one test, a novice opened 150 drunken oysters in twenty minutes, a speed difficult for the most experienced oyster shucker to attain with sober oysters. Neither flavor nor quality of the oysters was affected.



The chemical structure of ethyl acetoacetate shifts between the enol and keto forms. Both forms are shown in this diagram, in which hydrogen atoms are represented by circles, oxygen by ellipses, and carbon by squares. The square is used as the symbol for carbon, instead of the conventional tetrahedron, in the interests of simplicity.

Doubles Output of Ethyl Acetoacetate, Wider Use Foreseen

U.S.I. Pictures Continuing Postwar Demand for Its Increased Production

The postwar use of synthetic anti-malarials now seems certain to continue at much higher levels than was originally thought. For Atebrin and other quinine substitutes are demonstrating definite therapeutic advantages over the natural product. Equally significant, they are bringing tremendous reductions in the cost of treating and preventing malaria. With the end of the war, these factors will make it possible to attack—on a scale never before dreamed possible—a scourge which still takes more than a million lives a year.

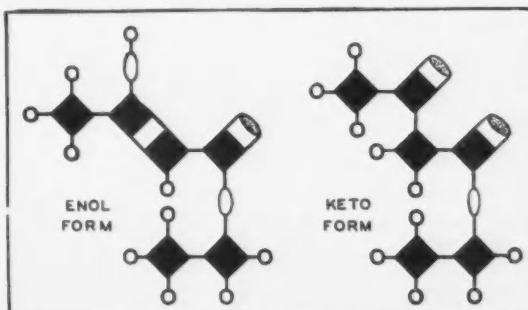
The use of the sodium derivative of acetone in the preparation of Atebrin and other anti-malarials thus will continue alone to account for large quantities of this reactive intermediate. The synthesis of thiamin hydrochloride (Vitamin B₁) and antipyrine are other uses now consuming steadily increasing tonnages.

Other Uses Seen

However, it was not merely to meet the mounting demand for ethyl acetoacetate in these two fields that U.S.I. recently doubled its production. For the organic structure of ethyl acetoacetate is such that it permits a wide variety of chemical reactions leading to a long list of valuable end-products. With the experience gained in the last few years in carrying out these reactions on a commercial scale, many new end-products loom as imminent realities. The two unusual properties which make ethyl acetoacetate important in chemical synthesis are:

1. The reactivity of the hydrogen on the carbon adjacent to the COOC₂H₅ group. Hydrogen substitutions at this point lead to the introduction of groups such as halogen, metal, acyl and alkyl radials. Ammonia, aniline, urea and many other types of compounds containing the NH₂ group, add with the elimination of water.
2. The addition products (especially the amides) mentioned above have a tendency to close into ring structures of the most varied types, giving for example substituted pyrroles, pyrazoles, pyrazolones,

(Continued on next page)



November



U.S.I. CHEMICAL NEWS

1944

Soybean Protein Extraction Stepped-up with Ethanol

The best soybean protein is that extracted from flaked soybeans, which contain less oil and a more soluble protein than does soybean expeller meal. To date, flakes available commercially have been those extracted by petroleum ether.

A study made by the U. S. Department of Agriculture laboratories demonstrates that flakes extracted by ethanol contain 10 per cent more protein than the petroleum extracted flakes, and in addition the final separation of the protein from the solution of flakes in water is greatly speeded. Protein precipitated from ethanol-produced flakes settled in 20 minutes, while it required two hours for protein from petroleum-produced flakes to settle. Filtration rate of wet protein is increased 50 per cent.

The pilot plant, operated by the laboratory for more than a year, should be a source of valuable information to plants engaged in the large-scale production of soybean protein.

New Glycine Process

Hinges on Ethanol

Glycine, and the primary amino carboxylic acid which is used as an intermediate in the synthesis of surface-active agents and corrosion inhibitors, are prepared more readily by a new method, according to the claims set forth in a recent patent.

The glycine is produced by heating a solution of sodium hydroxide, sodium cyanide, an alkyl metal salt of aminomethanesulfonic acid, and water together, adding hydrochloric acid to the solution, and evaporating the solution to dryness. From this residue the glycine hydrochloride is extracted with ethanol.

Primary amino carboxylic acid is obtained by reacting a metallic salt and an alkyl metal salt of aminomethanesulfonic acid together with water in an aqueous solution which is then acidified. After multiple refluxings, excess mineral acid and water are removed by evaporation. The dry residue is dissolved in ethanol to remove the amino carboxylic acid salts from the inorganic salts. An addition of aniline to the alcohol extract liberates the amino-carboxylic acid from its salt, and as it is virtually insoluble in ethanol, it may be separated directly by filtration.

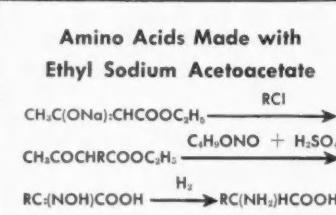
Ethyl Acetoacetate

(Continued from preceding page)

pyrimidines, pyridines, quinolines, isoaxoles, furane and coumarin derivatives.

Amino Acids

One example of a field in which ethyl acetoacetate appears destined to open up new possibilities is in the synthesis of the amino acids which have been shown to be essential to human life, and which are increasingly mentioned in projected nutritional programs. Starting with ethyl sodium acetoacetate, it is indicated that these amino acids can be prepared according to the following reaction:



Cottonseed Suggested as New Source of Lecithin

Soybean phospholipid, commercial source of lecithin which is an antioxidant and emulsifying agent widely used in foods and pharmaceuticals, finds a close counterpart in cottonseed phospholipid, according to recent investigations. Possibilities of using the cottonseed product as an added source of lecithin suggest themselves.

The cottonseed phospholipid was prepared experimentally by stirring commercial cottonseed, containing phospholipid, with changes of acetone to precipitate the phospholipids. The resulting powdered phospholipids were dissolved in ethyl ether and then poured into an excess of acetone. The resulting purified phospholipid was a stable, powdery solid, brilliant yellow in color, and the yield was 54 per cent. Fifteen to 20 per cent of this phospholipid could be dissolved by extracting with multiple changes of hot ethanol. This resulting lecithin fraction was high enough in phosphorous and nitrogen to render it commercially usable.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

A new wetting agent and detergent has been developed for use in the textile field. Added uses as an industrial cleaner and in priming compounds and pickling baths are claimed. According to the manufacturer, the product is highly concentrated, containing less than 5 per cent water, and is soluble in alcohol. (No. 859)

U.S.I.

To strip paint from metal surfaces, a new compound is designed to be brushed on, then washed off with a hose, carrying the paint with it. It is said to remove zinc chromate as well as other paint coatings and to permit the washing of brushes and other equipment in water. (No. 870)

U.S.I.

A new synthetic rubber cement, which is claimed to bond neoprene to neoprene or neoprene to fabric, and fabric to fabric, is announced. Company also announces a general-purpose cement claimed to adhere as well as rubber cement to a variety of surfaces. (No. 871)

U.S.I.

Fungus resistance for phenolics is claimed to be imparted by a newly-developed coating compound. It is intended to inhibit fungus development on phenolic electrical parts used in tropical climates. The new product may be applied by spray, dip or brush and has high dielectric strength. (No. 872)

U.S.I.

An improved phosphorescent pigment, which is claimed to emit a brighter afterglow of longer duration, has just been announced for use in luminous paints, tapes, decalcomanias, etc. (No. 873)

U.S.I.

To measure water hardness, a new instrument has been developed. Said to be much more rapid than gravimetric procedures, this new apparatus is designed to give accurate measurement of minerals, calcium, and magnesium in water samples in ten minutes. The new instrument is described as small, sturdy and inexpensive. (No. 874)

U.S.I.

Plastic insulating tape, claimed by its manufacturer to be resistant to caustic or corrosive fumes, oils, acids, alkali and moisture, has been placed on the market. Designed to protect wires, piping and equipment, it is stated to be remarkably flexible, of high mechanical strength and to have heat sealing and flame resistant properties. (No. 875)

U.S.I.

A new, heavy-duty paint, which is stated to protect brick, concrete, metal and wood surfaces against severe attacks by moisture, salt water, acid fumes and alkalis, is offered. This black, processed coal-tar paint may be applied by either brush or spray and is said to be well adapted for use on ships, docks, etc. (No. 876)

U.S.I.

Ceramic insulation may be deposited on copper wire and other electrical conductors by a newly developed process, according to a recent announcement. Films are stated to retain their electrical characteristics, at about twice the temperature limits of enamel and other organic insulations, and to be flexible enough for winding coils. (No. 877)

U.S.I.

U.S.I. INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N.Y.



BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS

Amyl Alcohol

Butanol (Normal Butyl Alcohol)

Fusel Oil—Refined

Ethanol (Ethyl Alcohol)

Specialty Denatured—all regular

and anhydrous formulas

Completely Denatured—all regular

and anhydrous formulas

Pure—190 proof, C.P., 96%

Absolute

Super Pyro Anti-freeze

Solox Proprietary Solvent

*ANSOLS

Ansol M

Ansol PR

*Registered Trade Mark

ACETIC ESTERS

Amyl Acetate

Butyl Acetate

Ethyl Acetate

Diethyl Oxalate

Diethyl Oxalate

PHTHALIC ESTERS

Dimethyl Phthalate

Diethyl Phthalate

Diethyl Phthalate

OTHER ESTERS

*Diol

Diethyl Carbonate

Ethyl Chloroformate

Ethyl Formate

INTERMEDIATES

Acetone-formamide

Acetone-ortho-nitroanilide

Acetone-ortho-chloranilide

Acetone-ortho-toluidide

Acetone-para-chloranilide

Ethyl Acetoacetate

Ethyl Benzoylacetate

Ethyl Sodium Oxalacetate

ETHERS

Ethyl Ether

Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES

Curby B-G

Curby Special Liquid

Vacatone 40

ACETONE

Chemically Pure

RESINS

S&W Ester Gums—all types

S&W Congo Gums—raw, fused & esterified

S&W *Aropiaz—alkyds and allied materials

S&W *Arofene—pure phenolics

S&W *Arochem—modified types

S&W Natural Resins—all standard grades

OTHER PRODUCTS

Collodions

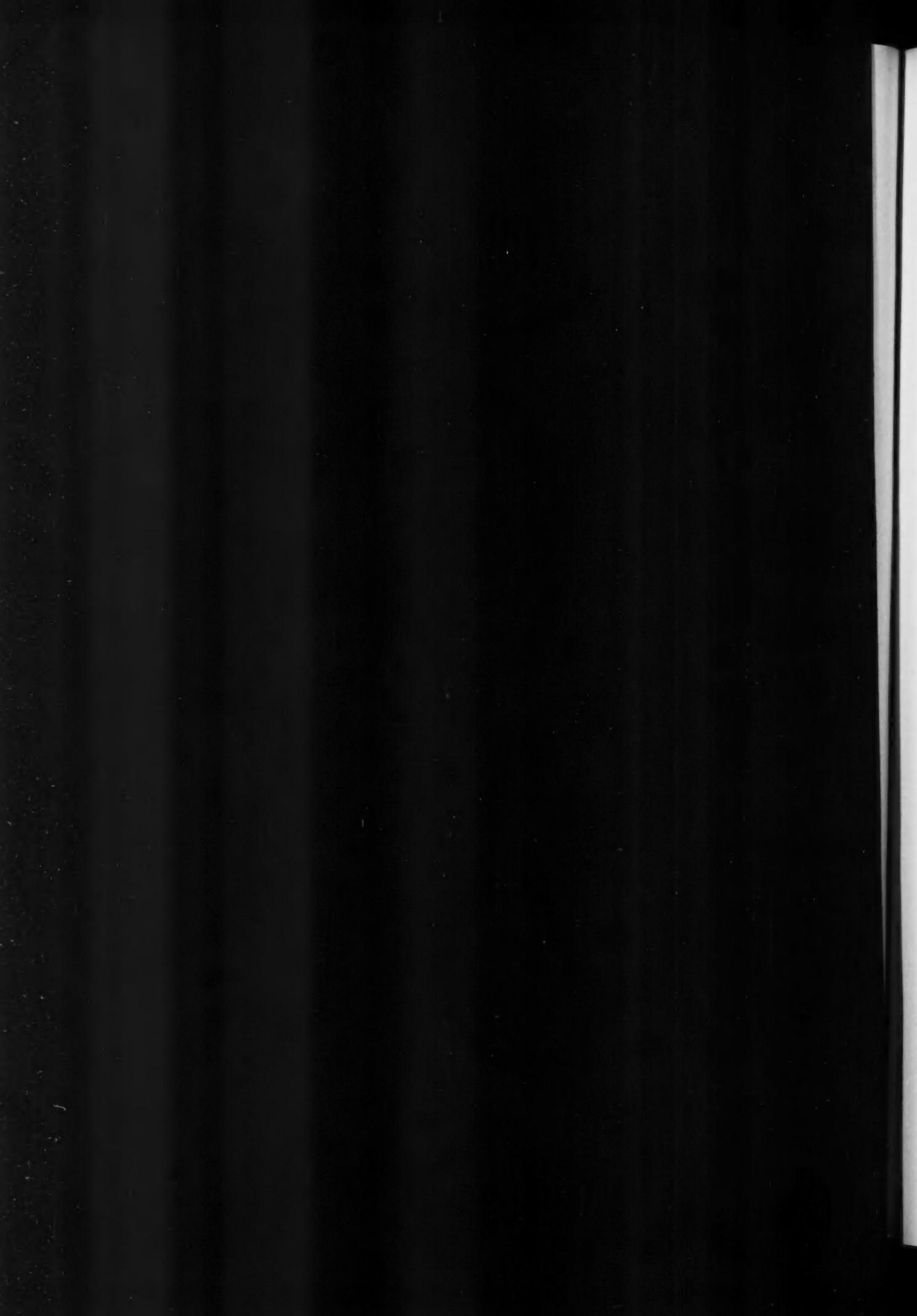
Ethylene Glycol

Nitrocellulose Solutions

*Indalone

Urethane





seemed very likely there would be another bonus in November for the toiletries industry, probably making at least 75 per cent of the normal supply available. But when they put the problem up to Krug, the current head of WPB, he said there would be no whiskey "holiday" immediately, which meant it would not come in November. Also, he made clear, there would be no "holiday" unless the "holiday" is announced at least 30 days before it is scheduled. This obviously means there will be no more industrial alcohol, at least not until December, or January. The supposition is that the course of the war in Europe has actuated WPB to be more cautious about even potentially reducing the stockpile supply which might be necessary to make more explosives. There is an impression here, however, that there will be more alcohol for the toiletries industry in the not very remote future. The Department of Commerce recently emphasized that Sweden successfully has been operating 33 plants producing alcohol from waste sulfite liquor flowing from its sulfite pulp. These plants transform into useful alcohol 50 per cent of the pulp which hitherto has gone to waste. Some of the sulfite alcohol is purified for human use, and it forms the principal raw materials for the domestic production of pharmaceuticals and toiletries. The plant in Washington, near Seattle, for the production of similar sulfite alcohol, is about to go into full-time operation. Apparently various sources elsewhere in the U. S. will make similar industrial alcohol.

COCONUT OIL FROM PACIFIC

The impression here is that fats and oils will grow more plentiful for the toiletries industry. WFA has issued various orders which make the situation easier. The campaign in the Pacific particularly has raised hopes for an amplification of the supply of coconut oil. If the Philippines are liberated it is anticipated the stocks which have accumulated in the Islands may be made available in the American market. Coconut oil ranked second only to sugar in exports from the Philippines. At present the supply from the Pacific sources is less than one-fifth of the normal received before Pearl Harbor. The fly in the ointment is that some Congressmen from the districts in the United States

which have supplied substitutes such as peanut and soybean oils have let it be known they will oppose the entry of coconut oil unless it is saddled with a high duty. The situation gives representatives of the Philippines considerable worry. They say they do not expect coconut oil, much wanted by cosmetic and soap manufacturers, will be able to come from the Philippines and other Pacific sources, in pre-war quantities, for at least two years. Pre-war coconut oil, wholesale, sold at 5 to 6 cents per pound, while domestic cottonseed and linseed oil cost 7 to 15 cents per pound. Even with the added 3-cent processing tax, coconut oil was less costly. Mexico last year produced 222 per cent more vegetable oils than it supplied in 1934. Current production of fats and oils in Mexico is estimated at a domestic consumption of 437,000,000 pounds. It was anticipated we would receive over 165,000,000 pounds of castor beans from Mexico. However, due to various causes, our imports this year, according to Commerce figures, will be less than 2,000,000 pounds. Commerce reports olive oil production in Spain, for 1944-45, will not exceed 220,000 metric tons. The oil is sold by the Spanish Government.

COSMETIC CONSUMPTION SURVEY

Commerce Department is preparing to make a survey in South America which has an immediate interest to the cosmetics and toiletries industry. The general plan is to make an attempt to discover what the people of the various Latin American countries may buy abroad, particularly from the United States, during 1945. The sampling will be aimed at some estimate of the local purchases they may plan to make, whether they plan to pay in accumulated dollars or forward dollars, and what their actual resources may be for the commodities they propose to buy. It is hoped this study will enable exporters in this country to perceive approximately in terms of dollars the volume of goods they may be expected to provide. The thought seems to be, for instance, that the purveyors of toiletries, cosmetics and soaps will be able to have a clear understanding of the amount of funds or resources available to pay for their share of the potential business. Apparently the gross total of funds and resources to

be expected for U. S. goods of all kinds will be regarded as a huge pie. The pie will then be apportioned in theory among the various U. S. commodity units, pro rata, according to the requirements revealed by the survey. Suppose the Latin Americans plan to spend \$50,000,000 over-all for all North American goods, and suppose the toiletries and cosmetics and soaps they want to buy represent \$5,000,000; the industry is then reasonably posted about what it is expected to supply, where it will be expected to send the wares, how it will be paid and in what form; and it can avoid the waste of over-selling and over-supplying. Bear in mind, the plan is still largely an idea; but apparently some steps already have been taken to assemble the data. Obviously, the State Department would perform have a hand in it.

The War Department recently revealed the contents of the ditty bag provided by the Red Cross which is carried by all WACs. The ditty bag is a "small cloth receptacle," (quotation from War Department description) which contains lipstick, nail polish, powder, smelling salts, probably a bit of rouge, a bit of perfume, a book to read and other traveling oddments. Down in the Pacific it was found one of the oddments was a tiny but very good cake of toilet soap. Incidentally, all synthetic organic soaps have been placed under complete allocation, as Schedule 44 of Order M-300. They may not now be used to make bubble soaps. They are needed to soften salt water, and for mobile laundries in combat areas. The War Department also announced with gusto that talcum powder, the stuff of which face powder is made, has gone to war. The military call it kaolin talc and they say it is used for many purposes, but particularly as insulation for electrical equipment. They found some of the best talc in Sardinia, and the Army has been bringing it by shipload into the United States since Sardinia was captured by the Allies. From Brazil the Department of Commerce reports the Cocoa Institute of Bahia estimates the immediate cocoa crop at 800,000 bags of 132 pounds each.

POST-WAR PLANNING DISCOURAGED

The need for cartons and other paper containers for use by the Army has increased by 10,000 tons during



Official U. S. Marine Corps Photo

Forward WITH THE 6TH WAR LOAN!

Victory depends upon materials—as well as men! To keep our American forces "closing in" overseas, you and every other manufacturer here at home must keep on making "Out Front" War Bond Quotas!

This means action now on every point in the fighting 8-Point Plan to step up Payroll Deductions. For instance, have you a 6th War Loan Bond Committee, representing labor, management and other important groups in your company? Selected Team Captains

yet—preferably returned veterans? If so, have you instructed them in sales procedure—and given each the Treasury Booklet, *Getting the Order?*

How about War Bond quotas? Each department—

and individual—should have one! Assigning responsibilities is vital, too! Have you appointed enough "self-starters" to arrange rallies, competitive progress boards and meeting schedules? Are personal pledge, order or authorization cards printed, and made out in the name of each worker? Planning for resolicitation near the end of the drive? Your State Payroll Chairman is ready now with a detailed Resolicitation Plan. And, have you contracted for space in all your regular advertising media to tell the War Bond story?

Your positive Yes to all points in this forward-to-victory 8-Point Plan assures your plant meeting an "Out Front" Quota in the 6th War Loan—and speeds the day of unconditional surrender!

The Treasury Department acknowledges with appreciation the publication of this message by

ROURE-DUPONT, INC.

Sole Agents for Roure-Bertrand, Fils & Justin Dupont, Grasse, France—Essential Oils and Aromatic Chemicals
366 Madison Ave., New York, N. Y. • Chicago • Los Angeles

*This is an official U. S. Treasury advertisement—prepared under the auspices
of Treasury Department and War Advertising Council.*



the present quarter. WPB apparently does not anticipate there will be any relaxation in the Order L-239 which controls folding and set-up boxes until the war in Europe is well behind us. By the same token, post-war planning and any extraordinary discussion of reconversion is not welcomed in Washington at this writing. Apparently the tremendous outburst of dated anticipations of a quick finish in Europe caused considerable dislocation in manpower and production-facilities morale. War and Navy both called upon General Electric to abandon conferences it had arranged in various parts of the country to make post-war plans. The guessing in Washington is that the blunt arrest of action required by Army and Navy stems from military and political motives. WPB has made known that cutbacks have not materialized in keeping with the announcements broadcast when Krug came back from the Navy. Late in October cutbacks had displaced less than one person per thousand employed. The word now is that "runouts," completed contracts, are expected to take



Lester A. Barber

the place of the cutbacks. This system of gradual tapering will be far less acute in effect than the much-heralded cutbacks. It is now found that plants which expected to be obliged to discharge thousands of workers with the cutbacks, find they are compelled to take on new war jobs and must find even more workers than they presently have on their rolls. Christmas, by Krug's order, is not classified as a holiday.

The Murray Small Business Committee has published a Buyer's Guide for Surplus Property. It tells you where to buy capital and producers goods; consumers goods; foods and allied types of war property; surplus abroad; merchant ships and small powered watercraft; and industrial scrap. You will find toiletries, cosmetics, and soaps, listed under the Procurement Division of Treasury. The Guide gives a full listing of all offices where the prospective purchaser can make arrangements to be kept advised. You can secure a copy by applying to the Murray Small Business Committee, Senate Office Building, Washington, D. C.

Lester A. Barber, Assistant Chief, Drugs and Pharmaceutical Unit, in the Department of Commerce, recently was elected Commander of Commerce Post 45 of the American Legion, Department of the District of Columbia. The Commerce Post is one of the largest and most active American Legion Posts composed of Government personnel in the Capital. Barber had a distinguished career overseas in the First World War.

Ceiling Raised on Gum Rosin

Maximum prices on gum rosin have been increased through MPR 561 Amdt. 1, Maximum prices for sales of gum rosin on Savannah, Ga., Cotton and Naval Stores Exchange are:

Grade	Per 100 pounds net in drums on Yard, Savannah, Ga.
X	\$6.55
WW	6.55
WG	6.28
N	6.03
M	5.87
K	5.85
I	5.81
H	5.81
G	5.79
F	5.75
E	5.65
D	5.12
B	5.05

Tung Oil Restrictions

Restrictions on the use, processing and refining of tung oil, and on allocations by the director have been suspended until December 31, by WFO 39.

Fibre Drums for Soap

WPB Order L-377 prohibits the use of fibre shipping drums for products other than those listed in the

amended order. The schedules permit the use of such containers for "Metallic soaps," and, when packed in drums of five gallons or more, soap, powdered, flaked, or paste, but not in cakes or bars.

Tallow and Grease Inventories

The War Food Administration has extended the current suspension of inventory limitations on tallow and grease imposed by WFO No. 67 through March 31, 1945. The suspension has been in effect since May.

Paperboard East of Rockies

Paperboard sold east of the Rocky Mountains has been amended, RPS 32, Amdt. 18, as follows:

	Price per M square feet
(f) Weatherproof filler stocks .022-.027, 942-1102 V-2S type filler stock—100% test	\$3.52

All Kraft, jute, and chip prices are based on standard grades in their respective natural colors.

Can Spirits Order Revoked

Order M-374, controlling the importation of beverage cane spirits,

and the production of the same in the United States and possessions, has been revoked.

Limitations Relaxed on Drums

Through Order L-197, Direction 2, restrictions have been relaxed on the use of new steel drums to be used in packing certain items. The items which are of interest to this industry are: Hydrogenated oils with a melting point of 65 degrees F. or above, including but not limited to shortening; jellies, jams and preserves; molasses; corn syrup; and syrup, mixed and unmixed.

This direction is to apply only to new drums with a capacity of over twelve gallons.

This permission is to end ninety days after November 1, 1944, but drums which have been delivered may be used to pack the above items during the ninety day period of any time thereafter.

The total weight of drums which may be accepted must not exceed 25 per cent of the total weight used to pack the same commodity to fill industrial orders in the year 1941.



TALK about Lanolin to the average drug store customer, and what's the reaction? SPLENDID!!

While most folks *believe* Lanolin adds something to a product, our researchers can prove that the use of Nimco Brand Lanolin will result in a *better* product . . . a product with a talking point . . . with extra sales appeal.

If you haven't studied the potent possibilities

of product improvement available through the use of Nimco Brand Lanolin, this is the time to begin your experiments.

The facilities and the know-how that have made Malmstrom America's Largest Supplier of Lanolin and Degas are available to you, together with samples, should you prefer to conduct your own tests.



**America's
No. 1 Choice
Because It's
5 WAYS
BETTER**

1. LOWEST ODOR VOLUME
2. GREATER UNIFORMITY
3. BETTER COLOR QUALITY
4. SMOOTHER TEXTURE
5. FINER BODY CONSISTENCY

N. I. MALMSTROM & CO.

America's
Largest
Suppliers of

{ **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical
DEGRAS • Neutral and Common • **WOOL GREASES**

147 LOMBARDY STREET • BROOKLYN, NEW YORK

Here and There Among Our Friends

► Don Beckett, formerly sales promotion manager of Sales Affiliates, Inc., has joined Hudnut Sales Co.,



Don Beckett

Inc., New York, N. Y., as assistant advertising manager. He was formerly associated with the sales department of Schnefel Brothers Corp., Newark, who manufacture La Cross manicure implements, and

with Gotham Advertising Co. of New York, as production manager. Mr. Beckett is the father of two children and lives in Inglewood, N. J. He is a native New Yorker, and is an alumnus of Rutgers University.

► Leon S. Finch, president of the Eagle Chemical and Cosmetics Co., Los Angeles, Calif., has announced the purchase of Nelson Laboratories. Chris Nelson has been elected vice-president and general manager of the newly acquired company. Mr. Nelson has been prominent in the cosmetic field on the west coast for the past twelve years. He was president of the California Cosmetic Association in 1941, and this year is serving as treasurer of that organization.

► George R. MacDonald, representative of Ungerer & Company's Boston Office, has been in New York with Mrs. MacDonald to enjoy a short vacation. While here he visited the company's New York Office.

► Richard Remus of Standard Synthetics, Inc., Kansas City, Mo., has just returned to New York to confer with the Head Office of the firm. Mr. Remus is the son of Edward Remus, president of the company, and has recently been on a business trip, visiting customers in Indianapolis, Cincinnati and St. Louis. While in St. Louis, Mr. Remus visited the company's agency, the Sansie Brokerage Co., which is operated by Gene Tuchschmidt. In spite of the feeling of

caution regarding forward buying on the part of large buyers, Mr. Remus reported considerable business activity in the cities he visited. There was also considerable interest shown in shipments of essential oils from foreign ports after the war.

► George N. Cox, popular representative of Standard Synthetics, Inc., of New York, has just been on an extended business trip through Texas and other southern states. He reports excellent business activity in Dallas and Houston. Mr. Cox resides in Kansas City where a branch of Standard Synthetics has been established for many years under the management of Richard Remus, serving the firm's customers in the middlewest and south with a complete line of essential oils, aromatics, perfumes and flavors.

► Herbert O. Deininger, vice-president and general manager of Schnefel Brothers Corp., Newark, N. J., manufacturers of "La Cross" manicure instruments, has just celebrated his twenty-fifth anniversary with the firm. Mr. Deininger went into the accounting department in 1919, and from there worked his way up to his present position.

► H. C. Richardson has been appointed vice-president and general manager of Alfred D. McKelvy, New York, N. Y. He assumes his new post after having served as sales manager for the McKelvy Co., makers of Seaforth Toiletries for men. He joined the company as West Coast representative in 1940, after having been toiletries buyer for Donaldson's Department Store in Minneapolis.

► Captain Thomas C. Sheffield, formerly the western manager of the New England Collapsible Tube Co., Chicago, Ill., is now working as executive assistant to General H. H. Arnold, Commanding General Army Air Forces. Captain Sheffield, who recently accompanied Robert Lovett, Assistant Secretary of War for Air, on an extensive inspection tour of

air force installations in France and England, has now returned to Washington, where he may be reached at room 3E1012, Pentagon Building.

► Herbert Hyams has just been appointed general sales manager of Farel Destin Cosmetics, Inc., New York, N. Y. He

was previously sales manager of Affiliated Products, Inc., and House of Louis Philippe, for a period of seven and one-half years. Before that time he was associated with R. L. Watkins Co., as

assistant sales manager. His past background has been primarily in the field of retail distribution, and will draw on this experience in expanding the distribution of the Farel Destin beauty preparations. Mr. Hyams was born in New York City, and is the father of two children.

► Ray C. Brewster has been elected divisional vice-president in charge of sales of the Frederick Stearns & Co. division of Sterling Drug, Inc. Before joining Frederick Stearns & Co. of Detroit, Mich., Mr. Brewster was vice-president of the House of Westmore. Prior to that, he had been national sales manager for household products of E. R. Squibb & Sons, and sales manager of Lentheric Inc., a Squibb subsidiary. Born in Brooklyn, N. Y., Mr. Brewster attended Adelphi Academy and Blair Academy.

► James Lane has joined Standard Synthetics, Inc., New York, N. Y., as assistant to the president, Edward Remus, and J. L. Hindle, technical director. Mr. Lane was formerly with Burroughs Wellcome Co.

► Fred Beyer, vice-president of P. R. Dreyer Inc., New York, N. Y., who has been ill since the middle of September is recuperating at the Passaic General Hospital, Passaic, N. J. Upon leaving the hospital after the middle of November Mr. Beyer will rest at home for a month or so before returning to take up his work again where he left it.



Herbert Hyams

How are you at Chopping Trees?



No, this is no joke. Many businessmen have volunteered to aid the paper shortage by spending vacations from their companies in the timber country, helping out on the man-power problem in the paper pulp industry.

Not that you have the time to do this. Nor that tree-chopping is exactly in your line. But, until the man-power shortage in this vital industry is over, until our armed forces no longer are spread all over the world where food, ammunition and medical supplies must be shipped them in paper protection

wrappers, there is a chopping job you must do. You must chop the use of paper in your business.

Sure, you've done plenty of this in the past months. But right now the need for paper is greater than ever. So the government asks you again to examine paper usage in your firm, see if you can't make even further savings.

And don't forget that baling wastepaper and sending it to a reprocessing plant is a most important part of the paper conservation job.

Remember—
**PAPER IS
WAR POWER**

USE LESS PAPER—SAVE ALL WASTEPAPER



This advertisement contributed by this publication and prepared by the War Advertising Council in cooperation with the War Production Board and the Office of War Information.

► Charles Fischbeck, who has been identified with the essential oil industry for over 32 years, has resigned

as vice-president of P. R. Dreyer Inc., to become manager of the essential oil department of the George Uhe Co., New York, N. Y., succeeding George Briasco who resigned the latter position on account of ill

health. Mr. Fischbeck is one of the best known men in the industry; and for many years was associated with Ungerer & Co. resigning as sales manager of that concern about nine years ago when he founded the Charles Fischbeck Co. which was merged with P. R. Dreyer Inc. about five years ago.

► Robert R. Hoffman has been promoted to general sales manager in charge of the Beauty Salon division of Revlon, New York, N. Y. He was previously active in the field sales department.

► Herbert C. Sheldon has been elected president and director of the Edward Ermold Co., New York, N. Y., after serving as general manager of the company since last July. For the past six years

Mr. Sheldon has also been president and general manager of the Sheldon Service Co., makers of electrical equipment,

a concern which he organized. Prior to that he had 15 years of sales and manufacturing experience with some of the larger brass products manufacturers including the Scovill Manufacturing Co. He is a native of Boston and lives in Manhasset, N. Y.

► Dr. W. A. Mosher, technical assistant to Dr. Emil Ott, director of research for the Hercules Powder Co., Wilmington, Del., has been lecturing at Middlebury College, Colby College, Massachusetts Institute of Tech-

nology, Brown University and the Springfield (Mass.) section of the American Chemical Society, chiefly on terpenes. "When Christopher Columbus discovered America," he said, "he was really looking for rare spices, flavors and perfumes which contain terpenes and terpene derivatives. Strangely enough many of the important discoveries in twentieth-century chemistry were the result of chemists searching for synthetic duplicates of the spices, flavors and perfumes which Columbus and other explorers sought in the fifteenth century."

► Irving Bennett, vice-president and sales manager of Syntomatic Corp., New York, N. Y., recently returned from an extensive trip through the middlewest. While visiting many friends and clients in the trade he introduced a number of new specialties in the aromatic field. In his observations of general business trends Mr. Bennett noted the dissipation of much of the anxiety and tension that gripped the consuming industry as a whole just prior to and during the early stages of the war. Mr. Bennett believes the experiences of these war years, and the lessons derived from them are guiding factors in the enthusiastic post-war plans of most of the important houses in the trade. The remarkable record of the aromatic industry speaks for itself.

► Ferdinand F. E. Kopecky, who recently joined the Heyden Chemical Corp., New York, N. Y., as patent attorney was formerly patent attorney for the Monsanto Chemical Co. and the Phillips Petroleum Co. He was graduated from Rutgers University and did post-graduate work there and at Harvard in chemistry. His professional career began when he joined the Bakelite Corp. as research chemist. Later he served Ellis Laboratories and the Monsanto Chemical Co. also in a chemical capacity.

► Frank Grennie was honored by a testimonial dinner on the evening of October 29. The dinner, which was given at the Hotel Pennsylvania, New York, N. Y., was attended by over 500 pharmacists together with their wives. Mr. Grennie is president of the New York State Pharmaceutical Association.

► Gerard J. Danco, founder and president of Gerard J. Danco, Inc., New York, N. Y., who lives in Morristown, N. J., has been com-

mended by a number of New Jersey newspapers for the skill and efficiency with which he organized and directed the 1945 Morris County War Chest campaign for Morris

Township. In previous years he served as a captain of the War Chest drive and also on the Red Cross campaign and the Fifth War Loan drive; and his work was so conspicuous that he was appointed chairman this year. Mr. Danco is a native of Brussels, Belgium, and was educated at St. Boniface School and St. Victor College. He joined the Boy Scout movement 32 years ago and is now chairman of the local high school troop. In World War I he was a member of Army Intelligence in the Belgian army and held memberships on the advisory board of the U. S. War Food Administration and Advisory Board of the Free French. His brother, Leon D. Danco, formerly of Lucretia Vanderbilt, is a captain in the U. S. M. C. in the Pacific, and his nephew, Leon D. Danco, Jr., is an ensign in the U. S. Coast Guard. Gerard Danco is well known in the essential oil industry with which he has been identified for many years and is a member of the Belgian Chamber of Commerce in this country as well as the leading trade associations.

► Howard A. Trumbull has been made manager of sales promotion of the glass container division of the Owens-Illinois Glass Co.

► Lieut. Anthony L. Ach, son of Eugene L. Ach, treasurer of Glass Industries, Inc., New York, N. Y., is serving as special service officer in the headquarters training group at Camp Lee, Va. Lieut. Ach left Cornell University in his senior year to join the service and in February of this year was married to Miss Barbara Stark, daughter of Dr. and Mrs. J. R. Stark who live in Cincinnati, Ohio.

Charles Fischbeck



Gerard J. Danco



H. C. Sheldon

► Dr. W. A. Mosher, technical assistant to Dr. Emil Ott, director of research for the Hercules Powder Co., Wilmington, Del., has been lecturing at Middlebury College, Colby College, Massachusetts Institute of Tech-

Duval

OIL

**BERGAMOT
ARTIFICIAL
EXTRA FINE**

*Synthesis of the Natural Oil
of Bergamot to a very high
degree of perfection not easily
matched. More economical than
the natural Bergamot Oil*

*Samples and prices gladly
furnished on request.*

Division of S. B. Penick & Company

COMPAGNIE DUVAL

121-123 East 24th St., New York



For the Cosmetic Manufacturer

■ DEPENDABLE
■ GUMS •
■ WAXES

■ CHEMICALS
■ FOR YOUR
■ MANUFACTURING NEEDS



**ABSORPTION
BASES**

Derived from the valuable ingre-
dients of

LANOLIN

Suitable for all water-in-oil Emul-
sions and Creams.

*Write for further information,
samples and prices*

INNIS, SPEIDEN & COMPANY

Established 1816

117 Liberty Street . . . NEW YORK 6
BOSTON • CHICAGO • CINCINNATI
CLEVELAND • GLOVERSVILLE • PHILADELPHIA

NEWS and EVENTS

Portraits of Penick Executives Presented at Company Dinner

Five executives who have served continuously with S. B. Penick & Co., New York, N. Y., for twenty-five years or more were honored by the presentation of their portraits at a dinner at the Hotel Astor, October 11. The occasion, at which some 200 executives and office employees were present, climaxed a three-day sales meeting, and also marked the thirtieth anniversary of the founding of the company. S. B. Penick, Jr., president and general manager of the company, well-known producer of botanical drugs and fine chemicals, said: "No firm could in any other way be so highly complimented as through the possession of a group of executives which has served it continuously for more than twenty-five years. Our good fortune has run high, as their service has helped to bring outstanding progress and success to our company." Members who received the portraits, in order of their length of service, were T. B. Dysart, associated with the company for 30 years and now manager of the Asheville, N. C., Branch; E. L. Schneider, personnel manager; C. W. Speed, Director and Treasurer; Harold Noble, general manager of the Insecticide Department, and Miss M. E. T. Corr, director and vice-president in Charge of Import Purchases. The paintings are the work of the eminent artist, Edmund Magrath.

Assn. of Consulting Chemists and Chemical Engineers Meeting

The annual meeting of the Association of Consulting Chemists and Chemical Engineers, Inc., was held on October 24, at the Hotel Shelton, New York, N. Y. New officers and counselors and hold-over counselors were announced as follows: President, Albert Parsons Sachs; vice-president, Henry M. Shields; secre-

tary, Claude F. Davis; treasurer, Sam Tour; three-year directors: Ralph L. Evans, Benno Lowy, Abraham Taub; hold-over directors: H. P. Trevithick, Albert K. Epstein, Philip P. Gray, I. F. Laucks, Nicholas M. Molnar, Bernard L. Oser and C. Weaver.

Roger & Gallet Upheld in Restraint on Use of Flame d'Amour

At the conclusion of an argument which took place October 9, in the case of Roger & Gallet vs. Prince de Bourbon & Dorelis, the United States Circuit Court of Appeals for the Second Circuit, affirmed the decision of the lower court in favor of Roger & Gallet, holding that its trade-mark "Fleurs d'Amour" had been infringed by the notation "Flame d'Amour" used by Prince de Bourbon & Dorelis in the sale of perfume. This decision disposes of the case, and under it Roger & Gallet, New York, N. Y., will obtain a permanent injunction and a decree for an accounting of profit, damages and costs.

Chicago Drug & Chemical Assn. Luncheon

The Chicago Drug & Chemical Association's October luncheon meeting was held at the Drake Hotel, Chicago, Ill., on October 26. The speaker was Jack Barnett, famous war correspondent home on leave after 26 months on the battlefronts of Europe and Africa, whose subject was: "I Shoot the Works," which was illustrated with sound movies.

George W. Luft Co. Petition Denied

The petition by the George W. Luft Co., Long Island City, N. Y., to restrain the Zande Cosmetics Co., Inc., in foreign trade has been denied by the Second Circuit Court.

Annual Conference of Packing Institute

This year the annual conference of the Packaging Institute was held in the Hotel New Yorker, New York, N. Y., on November 1 and 2. Scheduled speakers were: Joel Y. Lund, of the Lambert Pharmacal Co., St. Louis, Mo., who spoke on "The Scope of Packaging and Its Importance to Company Welfare"; C. O. Kendall, E. R. Squibb & Sons, New York, N. Y., who spoke on "Package Production Planning"; P. M. Gilfillan, Shellmar Products Co., Mt. Vernon, Ohio, "Package Manufacture Planning"; Dilman M. K. Smith, Opinion Research Corp., "Public Opinion Polls in Industry and Politics"; J. E. Joy, Radio Corporation of America, Camden, N. J., "Electronic Heating in Packaging"; George K. Scribner, Boonton Moulding Co., Boonton, N. J., "A Method for Measuring the Strength of Plastic Closures"; and Dr. C. A. Neros and Dr. L. E. Hoag, American Can Co., "Measurement of Gas Transmission Through Flexible Materials." The session on materials covered the subjects of aluminum, coating and film, modified wax coatings, collapsible tubes, paper shipping sacks, glass containers and closures, and laminated films, foils and papers. The entire morning of the second day was devoted to production requirements.

Hercules Powder Co. Reports Earnings

The Hercules Powder Co., Wilmington, Del., has reported net earnings for the nine months ending September 30 of \$3,527,948 after estimated Federal taxes of \$8,755,496, and a provision for contingencies of \$200,000. Net earnings for the corresponding period in 1943 were \$4,223,270. Net sales of goods and services for the nine month period were \$79,043,042, compared with \$91,940,775 for the like period in 1943.

PERFUMERS

BASIC MATERIALS



BASIC

PERFUME

SPECIALTIES



BUSH AROMATICS

INCORPORATED

136 LIBERTY STREET
NEW YORK CITY

Cable address: ARROBUSH
Telephone: WOrth 2-6557

America's
FINEST



POWCO BRAND Pulverized Neutral Soap, made from only the finest raw materials, laboratory controlled for uniformity of chemical and physical characteristics, and POWCO BRAND's wide experience in catering to the needs of dentifrice and cosmetic manufacturers are but two of the reasons why POWCO BRAND Pulverized Neutral Soap has helped to improve a long list of products.

Modern production methods and close selling margin make it possible for you to buy standardized air-floated POWCO BRAND Pulverized Neutral Soap to suit your needs—of better quality—at a saving.

POWDERED NEUTRAL SOAP

JOHN POWELL & CO.

116 East 32nd Street,
New York City.

Collapsible Tube Restrictions Relaxed

Collapsible tubes have had restrictions lifted, except insofar as their tin content is concerned, through Order M-115. Tubes for general use may now not use over .5 per cent of reclaimed tin, while those for dental products may use new tin not in excess of 3 per cent of tube weight.

Committee for the Sixth War Loan Drive

In the Sixth War Loan Drive, which gets under way November 20, the Cosmetic Industry is endeavoring to reach a quota of \$6,250,000. Benson Storfer, Chairman, has expressed his belief that the industry will exceed its quota. Many large companies, facing large tax payments, should subscribe during the drive to tax certificates which are payable for taxes as they come due. He further indicated that since the drive comes almost adjacent to Christmas and the end of the year bonds would make ideal Christmas gifts and year-end bonus payments. The complete committee is as follows: Benson Storfer,

Chairman; Neal Andrews, Maxwell F. Bower, Milton Breslauer, Herman L. Brooks, Robert E. Curran, John H. Curry, Norman Dahl, Joseph A. Danilek, Kenneth W. Elkington, Charles K. Everett, Irving Goodman, William H. Jacobs, Albert A. Katz, Mike K. Katz, Thomas J. Lewis, L. E. Lisner, Jack I. Poses, Andre Wick, Henry Worth and H. D. Rosenthal.

Founder's Grandson Newest MM&R Apprentice

Following a custom initiated by the elder P. C. Magnus, founder of Magnus, Mabee & Reynard, Inc., New York, N. Y., Robert B. Magnus, Jr., son of the firm's vice-president, R. B. Magnus, is being acquainted with the essential oil industry as an extra-curricular activity. Young Mr. Magnus, who recently celebrated his 13th birthday, receives his induction to the intricacies of the industry at the same age that his uncle, P. C. Magnus, began his orientation. Essential oil old-timers will undoubtedly recall the elder P. C. Magnus' custom of bringing his sons Percy, Joseph and Robert to the plant for similar training.

Arthur M. Ospenson Joins Magnus, Mabee & Reynard

Magnus, Mabee & Reynard, New York, N. Y., announces the appointment of Arthur Ospenson to its Greater New York sales staff. Mr. Ospenson has had long selling experience in the industry serviced by this firm. His earliest connection was with an outstanding perfume manufacturing firm in New York City. From there he went to the Mohegan Co. of New England, and was subsequently associated with printing interests which specialized in work for the drug, pharmaceutical and allied trades. A pleasant personality, coupled with a fundamental knowledge of the trade, assures Mr. Ospenson success in his new connection with Magnus, Mabee & Reynard.

Carload Lots in Glycerine

The meaning of "carload" in pricing glycerine has been clarified in MPR 38, Amdt. 1. It now establishes the breakpoint at 36,000 pounds net for carload and less than carload prices.

Plymouth

POWDER BASE NO. 7

Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.

Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15% and a formula is offered showing its use in this percentage.

Samples are at your disposal and we believe that this is one of the Plymouth products which warrants a serious investigation by every face powder manufacturer because it has real merit and will improve your product.

M. W. PARSONS

Imports AND

PLYMOUTH ORGANIC LABORATORIES, Inc.

59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.

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CABLE ADDRESS: PARSONOILS, NEW YORK

N·E·W·T

Requires
1 Dram to Gallon

Costs less than 4¢
to Deodorize
a Gal. Most Solvents

Like a Flowing Stream

Removes Impurities
Sweetens & Refreshes

ACTS UPON
Organic Matter

N·E·W·T
LEAVES NO
ODOR

Reduces Organic Ingredients
to NEUTRAL Smell.
Permanent, Odorless
Cheap and Non-Toxic

**IDEAL FOR
ISO-PROPYL ALCOHOL**

SPARHAWK CO.
SPARKILL, NEW YORK, U. S. A.

Photo by Chas. V. Sparhawk

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE BRIDGEPORT METAL GOODS MFG. CO.

BRIDGEPORT

Established 1909

PHONE BRIDGEPORT: 2-3128

CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

**BIMS of Boston Hold Last
Golf Party of the Season**

Pete Niles, Chairman of the BIMS of Boston, has announced that a gala time was had by all at the last party of the year at the Charles River Country Club on October 18. Both Low Gross and Grand Prize were won by Charles H. Slater. Low Net was won by Eddie Aldrich, and the Kickers by David O'Connell. Many prizes were passed out in an attempt to break the treasury of the BIMS for 1944. A most pleasant time was reported at each of the three successful tournaments this year.

**Westinghouse Studies
Laundering Synthetic Fabrics**

Westinghouse, Pittsburgh, Pa., is beginning the study of laundering synthetic fabrics such as rayon, nylon, glass fibre and other new fabrics which will be used in clothing and in home decorating after the war. This step is being undertaken so that consumers will know how to take care of such fabrics when they are available.

**Wander Reception Attended
by Prominent Cosmeticians**

Of unusual interest was the wedding reception given in honor of Mr. and Mrs. Burton Wander at the Sherry Netherland, New York, N. Y., on October 8. Mr. and Mrs. Wander



Helen Allen and Alice Betts

are publishers of Park East. Among the friends of the bride and groom who attended the reception were many who are prominent in the cosmetic industry. Among these were Helen Allen, vice-president of Parfum Corday, and Kathleen Mary Quinlan; Alice Betts, vice-president of Primrose House, and Mr. and Mrs. Robert J. Matz, Jr. Mrs. Matz is better known as Esme of Paris.

**Sterling Drug Honors
Cashier Edward Hauser**

In honor of his fiftieth anniversary with Sterling Drug, Inc., New York, N. Y., and predecessor companies, Edward J. Hauser, chief cashier of the Bayer Company Division, received a \$1,000 War Bond from the company. The presentation was made by James Hill, Jr., president, at a dinner in the Hotel Roosevelt, on October 5. Starting work as an office boy on October 8, 1894, Mr. Hauser became assistant cashier 35 years ago and was promoted to his present position in 1918.

**California Plans
Toiletries Show**

Trade in cosmetics, perfumery, soap and facial preparations, estimated at \$100,000,000 annually for the eleven western states, will be represented in the second California Toiletries Show, to be staged next June or July by the Los Angeles Chamber of Commerce domestic trade department. Buyers will be invited from all parts of the U. S. and Canada.

HARRY E. PFALTZ
69 SEVENTH AVENUE
NEW YORK

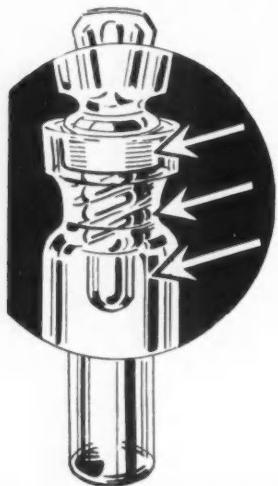
Since 1927

**Creator of distinctive perfumes
for the trade.**

A TINY BOTTLE

SCREW THREADS . . . on stopper provide a tight fit. They can easily be "screwed in or out".

ELONGATED TIP OF STOPPER . . . rounded smooth that makes an ideal applicator, eliminating long rod.



with a BIG PUSH

MINIATURES are sales getters. But, when you top one with an attractive STOPPER, you really have a scoop on the field.

The patented stoppers are interchangeable and can be had in assorted colors.

Every stopper offers these three selling features:

1. **BAND OF RUBBER** insures a snug fit and prevents leakage or evaporation.
2. **SCREW THREADS** make sure the bottle is closed when not in use. Nothing can find its way out.

These mighty MINIATURES are available in several sparkling original shapes and dainty design (patented).

MINIATURES may be small but with the assortment of various unique shapes and styles they open a door to greater sales.

Vials can be had in sizes from $\frac{1}{2}$ dram to 1 oz.; Miniatures in sizes $\frac{1}{2}$, 1 and 2 drams and $\frac{1}{2}$ oz.

GLASS INDUSTRIES, INC.

Originators and Manufacturers of Novelty Containers

10 WEST 33 ST.

NEW YORK, N. Y.

THE BENDER CORP.

Manufacturing Chemists Since 1922

Toilet Water • Cologne • Perfume

BULK AND PRIVATE LABEL



PLANTS IN

NEWARK, N. J. • EAST ORANGE, N. J. • SAN JUAN, PUERTO RICO

Inquiries Solicited

Address all correspondence to East Orange, N. J.

Union Carbide and Carbon Creates New Plastic Division

Union Carbide and Carbon, New York, N. Y., has found it advisable to create a new division on plastics due to the importance and diversification of the various developments in the fields of plastics among various units of the company. This step was taken to co-ordinate the technical knowledge, sales engineering, research production and distribution methods for all plastics in the organization. New company groups are: alloys and metals; chemicals; electrodes, carbons and batteries; industrial gases and carbide; and plastics.

Lectures Scheduled by American Society of European Chemists and Pharmacists

Lectures so far delivered before the American Society of European Chemists and Pharmacists have been "Antibiotics from Micro-organisms," by Dr. R. L. Mayer, on October 12, and "Allergy and Immunity," by Dr. Andrew Paul, on November 9. On December 14, Prof. Fritz Lieben will discuss "The History of Fermenta-

tion Problems." Lectures by the following scientists are on the ASEC schedule for 1945: Dr. Ernest Guenther, Fritzsche Brothers, Inc., New York, N. Y.; Prof. Werner Lipschitz, Prof. David Nachmansohn and Dr. D. Aufhauser. Guests are welcome.

Employment of Handicapped Veterans

"The Employment of the Handicapped Veteran," a survey based on the plans of 54 companies, covers such subjects as: job analysis from the standpoint of the physical requirements of the job, adaptation of jobs to the handicapped, determination of the veteran's physical and mental abilities and limitations, instruction of the handicapped to the job, their supervision, their training, their medical check-up, their adjustment to plant conditions, and transfer to other jobs.

A copy of this report is available to executives who request it on their business stationery. Address Policyholders Service Bureau, Metropolitan Life Insurance Co., 1 Madison Ave., New York, N. Y.

Percy C. Magnus Speaks on Post-War Planning

"Post-War Planning—Or Planning to Get Off the Post" was the topic of an address delivered by Percy C. Magnus, president of Magnus, Mabee and Reynard, Inc., New York, N. Y., on October 17, before the Rhode Island Pharmaceutical Assn. at Providence, R. I. In his address Mr. Magnus entered a strong plea to business men to drop smug complacency now, to stop talking and start preparing actual, workable plans.

FTC Complaint Against Perma-Rid

Perma-Rid Inc., Milwaukee, Wisc., has been charged by the Federal Trade Commission with misrepresentation in, among other charges, claims that the cosmetic preparation "Perma-Rid" removes superfluous hair from the body, that it destroys such hair, thereby terminating its re-growth. The complaint alleges that the name "Perma-Rid" is misleading. The respondent is granted 20 days to answer the complaint.

BENJ. FRENCH, INC.

ESSENTIAL OILS

AROMATIC CHEMICALS

ORIGINAL PERFUME BASES



SINCE 1914—AGENTS FOR:

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160 FIFTH AVENUE

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Natural and Aromatic Raw Materials Essential Oils

for

Perfumery •

Cosmetics •

Soap •

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INCORPORATED

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New York, N. Y.**

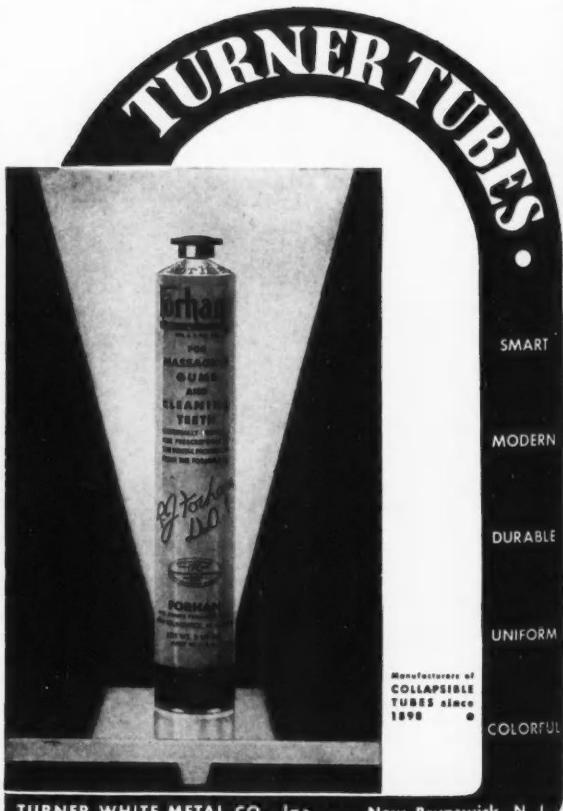
Grasse · Paris · London · Beyrouth

*Manufacturers of Quality Raw Materials
For Perfumery For Over 100 Years*

90 November, 1944

The American Perfumer

The advertisement features a woman's face in the upper left corner, with the words "We take the GLAM in your eye" written across it in a stylized font. Below this, the word "And..." is written in a large, cursive script. To the right of "And...", there is a bulleted list of services: "CREATE THE FORMULA", "DESIGN THE PACKAGE", "ORDER ALL MATERIALS", "DELIVER YOUR FINISHED PRODUCT", and "READY FOR SALE". Below this list, the words "COMPLETE PRIVATE LABEL SERVICE" are written. In the center, there is a detailed illustration of a two-story building with a balcony, labeled "HOUSE OF HOLLYWOOD". To the right of the building, the words "COSMETICS - PERFUMES" are written. At the bottom, the words "HOUSE OF HOLLYWOOD" are written again in a large, bold font. Below this, the address "777 E. Gage, Los Angeles 1" and "351 W. 48th St., New York 19" are listed.



Concentrated Orange and Lemon Juice Offered for Sale

The War Food Administration is offering for sale to the food industry on an individual sale basis 121,756 gallons of concentrated orange juice packed six 1-gallon cans to the case, and 21,850 gallons of concentrated lemon juice packed in 50-gallon barrels, according to E. K. Riley, Acting Chief, Procurement and Price Support Division, Midwest Office of Distribution, Chicago, Ill. The closing date for bids is November 18. All of the orange juice was processed in Florida and all of the lemon juice in California.

Soap Sales in Third Quarter of 1944

Soap deliveries made by manufacturers for all purposes, including Army and Navy, for the third quarter of 1944 were slightly less than in the second quarter. However, deliveries during the first three quarters were greater than during the corresponding period of 1943.

These comparisons are based on reports of 71 soap manufacturers

who produce about 90 per cent of the entire output for the United States.

Deliveries of soap, other than liquid, reported by the manufacturers amounted at the end of September 30, to 817 million pounds with a value of almost 112 million dollars. Deliveries of soap, other than liquid, for the three quarters amounted to 2,431 billion pounds valued at nearly 324 million dollars. The increase over the corresponding period in 1943 was 17.5 per cent.

Deliveries of liquid soap during the same third quarter came to 777 thousand gallons valued at 983 thousand dollars. Deliveries for the first nine months amounted to 2,445 thousands gallons valued at nearly three million dollars. The volume of business was 21.1 per cent ahead of the corresponding period for 1943.

New Members for TGA Advertising Practices Board

J. C. Ozier and J. A. Ewald have been elected as new members of the executive board of the Code of Advertising Practices of the Toilet Goods Association.

Annual Convention of National Paper Box Manufacturers' Assn.

The next annual convention of the National Paper Box Manufacturers' Association will be held at the Drake, in Chicago, Ill., next May 13 to 16 inclusive. This will be the 28th gathering of the set-up paper box industry members, the organization having been formed in 1918. Headquarters of the Association are at Phila., Pa. William R. Kreeger is secretary.

Lambert Co. Buys Harrower Laboratories

The Lambert Co., St. Louis, Mo., has bought for cash the Harrower Laboratory, Inc., of Glendale, Calif. The buying price has not been disclosed. The Harrower Laboratory has been producing pharmaceutical specialties in the field of endocrinology since 1918. Dr. Henry R. Harrower will continue as consultant and director, Dr. R. B. Haining will remain as executive vice-president and general manager, and H. C. Nelson will continue as secretary-treasurer. Home office and plant will remain at Glendale.

YOU CAN DEPEND NOW AS ALWAYS ON SHERWOOD'S
CONSISTENTLY HIGH QUALITY AND PERSONALIZED ATTENTION

white
oils

petrolatums
ceresines, white and yellow

SHERWOOD REFINING COMPANY, INC.
THE REFINERY OF CONTROLLED SPECIALIZATION
ENGLEWOOD, N. J. Refinery: — WARREN, PA.



FOR years we have been privileged to represent TOMBAREL FRERES, one of the world's outstanding producers of natural essences, SUPREME Flower Oils and Surfine Essential Oils . . . and to work in close collaboration with them.

With the liberation of France and the expected early resumption of her industries, we hope that in the not distant future we may again be in position to offer their fine natural flower oils.

Meantime, we continue to render expert service in helping to solve current problems.

We solicit your inquiries

Special **PERFUME CREATIONS**
for every Occasion

Also **BASIC PERFUME MATERIALS**
AROMATIC CHEMICALS
. . . and **ESSENTIAL OILS**

TOMBAREL
Products Corporation
L. J. Zollinger, President
12 East 22nd St. New York 10

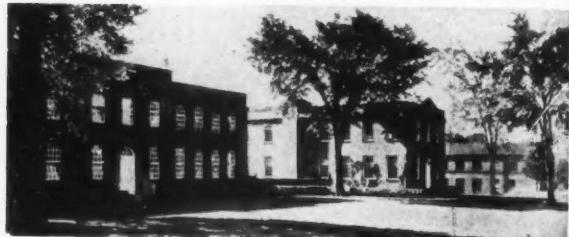
OUR
AMMONIUM
THIOGLYCOLATE
steadily grows in popularity!

- REASONS: 1. Exclusive process affords greater skin protection (patent pending).
2. Full acid content and the finest reagents to speed processing action.
3. Uniform in quality and appearance . . . free from discoloration.
4. Alkalinity precisely balanced . . . ammonia odor barely perceptible.
5. Production under expert chemical supervision and careful laboratory control.

Your Inquiries Are Invited



STANTON
LABORATORIES
Manufacturing Chemists
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Laboratory Bldgs., R. T. Vanderbilt Co., E. Norwalk, Conn.

VEEGUM

Magnesium Aluminum Silicate Gel
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Protects Flavors . . . Protects Perfumes
Stabilizes Emulsions

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Samples upon Request

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Specialties Department

R. T. VANDERBILT CO., INC.
230 Park Avenue • New York 17, N. Y.

Associated Distributors

Ask Damages

Associated Distributors, Chicago, Ill., has filed suit in the San Francisco courts against Weinstein Co., seeking permanent injunction and damages because of fair trade price violation on Chen Yu lipstick. The complaint claims that Chen Yu was advertised and sold at less than the minimum retail price established in the contract. The court has issued a temporary restraining order prohibiting any further price cutting. The amount which Associated Distributors is asking for damages is \$100,000.

Swan Soap Sponsors

Contest

Swan soap, a product of Lever Brothers Co., Cambridge, Mass., is giving dealers and customers an opportunity to participate in a big "Name the Swan" contest.

A total of 507 cash prizes totaling \$30,000 and a grand prize providing the sum of \$100 a month for life or \$20,000 in a lump sum are being

offered to winners who find a first name for Mama Swan, and in 25 words or less complete the sentence "I like Swan soap better because—."

Dealers also participate as they win prizes totaling \$5,000 when their names appear on entry blanks of consumer contest winners.

TGA Considers Research Program

As a result of a decision reached by the executive board at its first autumn meeting, the Toilet Goods Association, New York, N. Y., has adopted a program of scientific research. No definite program has yet been adopted but committee members feel that the research will be along the lines of biological study of the effect of toilet preparations and their ingredients on the skin.

Hair and Bob Pin Order Revoked

Limitations Order L-104 has been revoked. Thus, the manufacture of hair pins and bob pins is now permitted without restriction except for the use of brass and copper.

USO Reports on Soap Purchase

Since the first of the year, according to O. A. Card of the Purchasing Department, the U. S. O. has bought 1 1/4 million bars of soap. For the same period of time the USO has purchased 75 thousand bath towels. The soap is used by service men and women in USO clubs, lounges and other operations.

Carnauba Wax Article

An interesting and informative article on the subject of carnauba wax is a feature of the most recent edition of the ISCO News, house organ of Innis, Speiden & Co., N. Y.

Aviation Section of New York Board of Trade Luncheon

The second luncheon-conference on "Air Commerce—A Matter of Coordination" is called to meet at the Hotel Astor, New York, N. Y., on November 28, by the New York Board of Trade. It is indicated that outstanding authorities will present their views.

finer Cosmetics

... finer because they are manufactured in a most modern plant by skilled factory employees under the supervision of quality-minded production men according to formulas perfected by experienced chemists.

Private Label Toilet Preparations Exclusively

COSMETRIES

INCORPORATED

30 East Tenth St.

New York 3, N. Y.



A C E T A T E
B U T Y R A T E
F O R M A T E

THREE NORTHWESTERN FLAVORING ESTERS WHICH ARE STILL AVAILABLE IN MODERATE QUANTITIES

THE LARGEST MAKERS OF BUTYRIC ETHER IN THE WORLD

THE NORTHWESTERN CHEMICAL CO.
INCORPORATED 1882 WAUWATOSA, WISCONSIN

Lanone

LOOKS — BEHAVES — FEELS

Like Lanolin

BUT

HAS GREATER EMULSIFYING PROPERTIES
PRACTICALLY ODORLESS

Lanone is being successfully used in
lipstick, shaving creams, hand creams,
emollient creams and other cosmetics.

Write for Literature and Samples

Price 35¢ lb. in drums
quantity price lower

**CONTINENTAL
CHEMICAL COMPANY**
2640 Harding Ave., Detroit 14, Mich.



WHY ARGUE?

After all, results are the bull's eyes
in the target of success.

Leading cosmetic houses who de-
pend upon us as a source of supply, give us
credit for maintaining the high quality standard
so essential to their success.

Convincing samples of Kelton Lip-
stick, Rouge, Powder, Mascara and Eye Shadow
merely await your green light. Why not flash it
today?

KELTON
Cosmetic Company

230 West 17th Street, 819 Santee Street,
New York 11, New York Los Angeles 14, Calif.
Lipstick • Eyeshadow • Rouge • Mascara • Powder

Barber Appointed Specialist of State Department

Lester A. Barber, of Drugs and Pharmaceutical Section, Department of Commerce, has been formally appointed by the State Department as Specialist in the Auxiliary Service of the Department of State, and has been instructed to proceed forthwith to France to report on the availability of essential oils, especially floral oils.

He has been instructed to report to the American Embassy in Paris to which he will be attached. He is expected to tour France in an automobile, which he will drive, and may possibly go into Portugal, Spain and Italy. It is expected he will be in Europe for at least two months. He is instructed to join as State Department Officer any joint American-British Mission which may be sent into France for a similar purpose. Mr. Barber was chosen as the man best equipped by experience and training and knowledge of the commodities and the country. His selection was approved by U. S. Commercial Corporation, the subsidiary of FEA, by WFA, by WPB, and by the trade.

Mayham Appointed Vice-President New York Toilet Goods Assn.

Stephen L. Mayham has been appointed Executive Vice-President of the Toilet Goods Association, New

York, N. Y., a position created by the Executive Board of the association at its November 2 meeting which is more in keeping with the duties he has fulfilled in view of the

growing size and increased functions of the association than that of Executive Secretary. The latter office has been abandoned. The title of H. D. Goulden has also been changed from that of Director of the Board of Standards to Director of Scientific Research and Standards. This change was made because of the importance to be given to research in a new program to be announced soon. Henry Etsch, who has been on the association staff for a decade, has been ap-

pointed Assistant Secretary, a new position created by the board. By-laws of the association were amended to make the foregoing titles possible. Mr. Mayham is an alumnus of Union College and has been identified with the trade for many years chiefly in a journalistic capacity on the *Journal of Commerce* and as editor of THE AMERICAN PERFUMER. After serving with the New York World's Fair, he succeeded H. Gregory Thomas as Director of the Board of Standards and after the death of Charles Welsh, former secretary of the association, he was appointed to that position. Mr. Goulden was formerly associated with Jacqueline Cochran.

Use of Name Petition by Houbigant Denied

The U. S. Supreme Court has denied the petition by Houbigant Inc. and Cheramy, Inc., New York, N. Y., to use the word France, or Paris, on their labels without explaining that the contents are not of French manufacture. This leaves in force a decree of the Second Circuit Court of Appeals (N. Y.) enforcing an order of the Federal Trade Commission.



S. L. Mayham

Many years ago we first offered fine paper boxes to cosmetic manufacturers. It is significant that since then most of the concerns with whom we began business still call upon us to meet their needs.

Despite the shortage of raw materials it is our pledge never to depart from the high standard of quality that has always been identified with KARL VOSS paper boxes.

There is no finer cosmetic container than a KARL VOSS box.

KARL VOSS CORPORATION
DIVISION OF SHOUP-OWENS INC.

HOBOKEN

NEW JERSEY



REG. TRADE MARK

Raw Materials Aromatic Chemicals Essential Oils Imports

for

Perfumery · Soap · Food · Flavors

Gerard J. Danco

INCORPORATED

3 E. 44th ST., NEW YORK 17, N. Y.

Cable Address: CODAN, New York

SORBOTEX 301

A New Development in Absorption Base

WHAT IT IS

SORBOTEX 301 is a white, ointment-like odorless mixture of higher fatty alcohols and esters in a hydrocarbon base. It does not contain lanolin. It is free from any tendency to eventually discolor the products in which it is used or to impart an undesirable odor to them. Its water absorption is substantially greater than that of absorption base containing either lanolin or lanolin isolates.

WHAT IT DOES

SORBOTEX 301 makes white, stable water-in-oil emulsions. In the presence of an alkali, it is also a highly effective emulsifier and stabilizing agent for oil-in-water emulsions, an advantage offered by very few types of absorption base.

USES

SORBOTEX 301 is applicable to night creams, cold cream, ointment bases, permanent wave preparations, etc. It can also be used as an extender for lanolin.

Suggested percentages: In water-in-oil emulsions, that is, creams having a high fat-content, such as night creams, for instance, up to 25 per cent. In oil-in-water emulsions, that is, creams with a low oil-content, such as vanishing-type face and hand creams, up to 5 per cent. In permanent wave preparations, up to 2 per cent.

MAKE THIS TEST

Make a small batch of one of your creams, replacing the absorption base that you are now using with Sorbotex 301. Compare the cream containing Sorbotex 301 with that made with your present absorption base, as to appearance, texture, emollient effect, and stability. We will gladly supply the Sorbotex 301 required to make the test, without charge.

SORBOTEX 301 is made of freely available raw material; it can therefore be supplied promptly in all quantities. Its price is attractive.

VAN DYK & COMPANY
INCORPORATED 1904

MANUFACTURERS OF PERFUMERY & COSMETIC RAW MATERIAL SINCE 1901.
OFFICES, FACTORY, LABS.: MAIN & WILLIAM STS., BELLEVILLE 9, N. J.
WESTERN OFFICE: 1282 SUNSET BLVD., LOS ANGELES.

Paper Boxes
for the Cosmetic and
allied trades . . .

Present conditions preclude
us from accepting any or-
ders at the present time for
immediate delivery.

Eugene K. Plumly Co.

Federal and Juniper Streets
Philadelphia 47, Pa.



3 NEW WHITE SACHET FILLERS

Made in fine ground wood powder—NEUTRAL COLOR.
Fine ground aromatic red cedar powder.
Also finely ground mineral dust.
Highly absorbent, retains scent.
Above grades are now being used in the cosmetic industry.
Always uniform—prompt shipment—no priorities needed.
Sawdust for other purposes—special fine and coarse grades.

Ask for samples

Cosmetic Materials Division

NATIONAL SAWDUST CO. INC.
76 North 6th Street
Brooklyn 11, N. Y.

STABILIZED

cold Wave
SOLUTION

FINISHED AND READY TO USE

7½% THIOLYCOLLATE
CONSTANT pH OF 9 PLUS

Will not turn pink when exposed to air
... shipped in gallons and barrels.
UNLIMITED PRODUCTION

VACUUM DISTILLATION COMPANY
617 N. Kingshighway
St. Louis 8, Mo.

Harvest Test for Peppermint Oil

Purdue University has developed a test for determining the best time for harvesting peppermint to obtain the highest yield of oil.

The test is based on the prediction that the yield of oil is highest when the free menthol content approaches 45 per cent, and that as the menthol content increases the viscosity of the oil increases. The test is for viscosity.

Oil is distilled from a sample of mint and tested; if it falls below 41 per cent the crop is not ready for harvest.

Purchase of French Perfume

The purchase of French perfumes by our soldiers, to be sent to the United States by mail, has assumed such proportions that the American authorities in Paris have been forced to prohibit further mail shipments of the commodity, except under the supervision of the Red Cross.

There have been reports of 500 to 600 bottles being purchased at one

time. It would appear to be obvious that these are not bona fide purchases, but for the benefit of certain interests.

There is no wish to work a hardship on a soldier who wishes to make a gift to his wife or sweetheart of a bottle of perfume, but rather to put a stop to a practice wherein U. S. manufacturers are faced with unfair competition.

Obituary

Dr. Thomas Midgley, Jr.

Dr. Thomas Midgley, Jr., who became internationally known through his discovery of tetraethyl lead died in his home near Columbus, Ohio, on November 2. His death appeared to be the result of an accident.

Dr. Midgley was the holder of more than one hundred patents. He was the holder of many honors, and was both president and chairman of the board of directors of the American Chemical Society. He is survived by his wife, a daughter and a son.

Frederick Cary Allen

Frederick Cary Allen, who was treasurer of Dodge & Olcott Company for a great many years until he retired in February, 1942, died in Brooklyn, N. Y., on October 22 in his 72nd year. Mr. Allen started to work for the firm of Dodge & Olcott in 1887 in their old building at 36-38 William St. For several years he acted as assistant to Emil Martens, who was elected treasurer of the company when it was incorporated in January, 1905. Mr. Allen was known throughout the trade as one of the ablest credit men in the industry. Not only was the essential oil industry aware of his ability but bankers and chartered accountants shared the same view. Mr. Allen will not only be sorely missed by his many friends in the trade but his passing will be equally regretted by those associated with the Memorial Presbyterian Church in Brooklyn, in which he had been active for many decades, serving as a trustee and treasurer. In his early days Mr. Allen was active in the militia, eventually becoming first lieutenant in the old 23rd Regiment of the New York National Guard.

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Market Developments

Brighten as Victory Nears.

MARKET developments are becoming more interesting as victory in Europe nears, and the international picture becomes clearer. Relaxation of government control over business will also tend to make for more normal fluctuations in commodity values as markets gradually return to the old law of supply and demand basis.

ARRIVAL OF ESSENTIAL OILS

Highlights in raw material markets included the arrival of approximately 1,609 cases of bergamot oil from Italy. The ship also brought in over a thousand cases of lemon oil and twenty cases of orange. The lemon oil, according to reports, has been turned over to the War Food Administration for distribution as in the case of the previous arrival of 100,000 pounds of the article from Sicily. It is not likely, however, that the new lots of lemon will get into private trade since the Army has informed WFA that it will require the entire amount including the first shipment to fill its own needs.

Distribution of the bergamot oil is to be made by WFA only to those importers who were engaged in this business during the base period from 1936 to 1940. They will be allotted quantities on a percentage basis comparable to the ratio of their imports during the base period to total imports. As far as can be learned, the prices at which the oil is to be sold

have not yet been established. With such a large quantity of natural bergamot oil to be made available in this market, trade factors are of the opinion that there will be less demand for such articles as linalool, linalyl acetate and terpinyl acetate for the manufacture of imitation bergamot. Use of bois de rose oil will likewise be adversely affected with a possible decline in prices of this oil to more normal levels. Importers have been assured that the new lots of bergamot oil will be released at prices considerably below the current nominal figures that have prevailed on spot.

Another highly important development was the State Department's announcement that the United States had recognized the DeGaulle administration in France. While it may require some time before anything like a normal flow of imports of various floral oils will be noted from France, nevertheless the trade feels that we are now nearer to the period when fresh lots of many scarce articles can be expected than at any time since the beginning of the war.

PEPPERMINT OIL PURCHASED BY WFA

The attention of the trade quickly turned to mint oils when the War Food Administration entered the market for 100,000 pounds of peppermint and announced that this amount would only be a part of the total to be purchased. It was also

explained that with the entrance of the government into the market, and the fact that consumers of peppermint oil may now purchase up to a full year's inventory, a firm market in the oil should prevail. At a late hour when this report was completed it was learned from Washington that of the 100,000 pounds of peppermint desired, WFA had contracted so far to purchase 20,000 pounds at \$7.60 from William Leman, Inc., Bremen, Ind., and 50,000 pounds at the same price from M. Brown & Sons, South Bend, Ind. The other 30,000 pounds remained to be contracted.

BRAZILIAN MINT CROP

With fairly large quantities of Brazilian menthol hanging over the spot market in the absence of any unusual demand, prices here declined to \$14 a pound in the face of more bullish advices concerning the coming crop in Brazil. Reports received here indicated that the extended period of dry weather will probably delay the harvesting of the mint crop in Brazil and that the yield of oil may fall short of earlier expectations thus affecting menthol production. Some local houses could not understand why spot prices should decline in the face of such reports. Unless there is a heavier demand here, spot stocks may continue to influence prices, especially since many holdings are reported in speculative hands.

The arrival of a small quantity of cassia oil tended to create considerable speculation as to the possibilities of future arrivals of several articles of Chinese origin. Certain essential and high priced articles, may be flown from China.

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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION
ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912,
AND MARCH 3, 1933, OF THE AMERICAN PERFUMER AND ESSENTIAL OIL
REVIEW, published monthly at Philadelphia, Pa., for October 1, 1944.

STATE OF NEW YORK } ss:

COUNTY OF NEW YORK } ss:
Before me, a notary public in and for the State and County, aforesaid, personally appeared Harland J. Wright, who, having been duly sworn according to law, deposes and says that he is the Publisher of THE AMERICAN PERFUMER AND ESSENTIAL OIL REVIEW and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation) etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, postal Laws and regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: (if owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Robbins Publishing Co., Inc., 9 East 38th St., New York 16, N. Y.; J. H. Moore, 9 East 38th St., New York 16, N. Y.; Gertrude A. Moore, Indian Head Point, Riverside, Conn.; F. C. Kendall, 9 East 38th St., New York 16, N. Y.; Natalie Aldrich Kendall, Hardwell Road, Millburn, N. J.; H. O. Andrew, 9 East 38th St., New York 16, N. Y.; M. M. MacCollum, 9 East 38th St., New York 16, N. Y.

2. That the owner is: (if owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Robbins Publishing Co., Inc., 9 East 38th St., New York 16, N. Y.; J. H. Moore, 9 East 38th St., New York 16, N. Y.; Gertrude A. Moore, Indian Head Point, Riverside, Conn.; F. C. Kendall, 9 East 38th St., New York 16, N. Y.; Natalie Aldrich Kendall, Hardwell Road, Millburn, N. J.; H. O. Andrew, 9 East 38th St., New York 16, N. Y.; M. M. MacCollum, 9 East 38th St., New York 16, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities of the company, other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

HARLAND J. WRIGHT.
(Signature of Publisher)

Sworn to and subscribed before me this 29th day of September, 1944.

ANNA L. HARTMANN.

(My commission expires March 30, 1945.)

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(Continued on page 103)

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(Continued from page 103)

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Styrol Alcohol	9.25@ 12.00
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Yellow, refined	.531/2 Nom'l
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Civet, ounce	22.00@ 28.00
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Amber	.113/4@ .121/2
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Sumatra	1.40 Nom'l
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Henna, p.wd.	.30@ .35
Kaolin	.05@ .07
Labdanum	3.25@ 5.00
Landolin, hydrous	.30@ .34
Anhydrous	.31@ .35
Magnesium, carbonate	.09@ .101/4
Stearate	.24@ .27
Musk, ounce	50.00 Nom'l
Olibanum, tears	.18@ .35
Siftings	.111/2@ .13
Orange Flower Water, gal.	1.75@ 2.25
Orris Root, African, p.wd.	1.10@ 1.15
Paraffin	.061/4@ .09
Peroxide	1.10@ 1.75
Petroatum, white	.061/4@ .081/2
Quince Seed	1.65@ 1.95
Rice Starch	.10 Nom'l
Rose Leaves, red	3.45@ 4.00
Rose Water, gal.	6.50@ 8.00

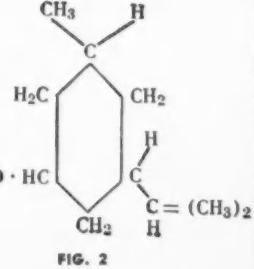
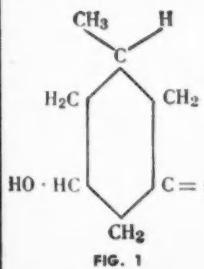
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Castor No. 1, tanks	.13@
Cocoanut, Manila Grade, c.i.f., tanks	.0835@
Corn, crude, Midwest, mill, tanks	.123/4@
Corn Oil, distilled, drums	.161/4@ .161/2
Cotton, crude, Southeast, tanks	.123/4@
Grease, white	.081/2@
Lard	.15221/2@
Lard Oil, common, No. 1 bbls.	.14@
Palm, Niger, drums	.0865
Peanut, blhd., tanks	.1501@
Red Oil, distilled, tanks	.12@
Stearic Acid	
Triple Pressed	.18%@ .187/8
Double Pressed	.151/2@ .167/8
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Tallow, N. Y. C., extra	.081/2@
Whale oil, refined	.1232 Nom'l

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Production Control and the Analysis of Cosmetics

by MAISON G. deNAVARRE, Ph.C., B.S.

Technical Editor of the American Perfumer & Essential Oil Review and of Elaboraciones y Envases; Special Lecturer in Cosmetics, Wayne University, College of Pharmacy; Consulting Chemist

Ninth Installment

The eighth installment was published in the preceding issue. Subsequent installments will appear in forthcoming issues.

ACKNOWLEDGMENTS

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CHAPTER IV (continued)

Physical and Chemical Testing Gravimetric and Volumetric Methods

P-133—TINTING STRENGTH

Take 10 grams of standard white uncolored face powder and rub into a paste using 2.5 grams of 65/75 viscosity white oil or any other amount that will give a fairly stiff paste. (This will vary with the formula, fineness of pigments and their source, hence no exact figure can be given. The amount should be quite constant however, as it will throw the test off.) Do the same with the sample to be tested.

Separately keep on hand in glass jars or collapsible tubes, a paste of the color mixtures (that will be used in the regular powder formula) made from some definite proportion of color and oil, such as 1 gram of color to 0.6 grams of white oil 65/75, either rubbed up by hand using a definite number of rubbings, or ground on a roller mill

using a definite number of minutes for the grinding.

Take 3 grams of the white powder paste and add to it a predetermined amount of color paste, say 0.1 gram, doing the same with the standard white powder paste. Rub up both using 100 rubs with a 3 inch muller and compare the mass tone or overtone.

This test will show if the white base under test varies the hiding power and tone from the standard as a result of either using new ingredients, alternate sources of supply or inferior materials when regular materials are not available. The variation will result in a different overtone of the rubbed mass.

Pastes made up as indicated above will vary in composition with each manufacturer's formula for face powder. If made up in advance and kept in a cool dark room,

the pastes will be quite stable for one year or even more.

P-134—TITER—SOLIDIFICATION POINT OF FATTY ACIDS

(Adopted as Tentative, May, 1940)
(A.O.C.S.)

REAGENTS

1. Glycerol Caustic.—Dissolve with the aid of heat, 250 grams of solid potassium hydroxide in 1250 grams of glycerin (dynamite or C.P. grade). To avoid foaming, do not heat above 135°–145°C.

2. Sulfuric Acid.—30% by weight of sulfuric acid. This may be readily prepared by adding 16 ml of sulfuric acid (Sp. Gr. 1.84) to 70 ml of water.

APPARATUS

1. Two-liter, Griffin, low-form beaker.
2. Wide-mouth bottle, capacity 450 ml, height 190 mm, inside diameter of neck, 38 mm.
3. Test tubes, length 100 mm, diameter 25 mm, with or without rim. These tubes may have an etched mark, extending around the tube at a distance of 57 mm from the bottom to show the height to which the tube is to be filled.
4. Saponification vessel. This may be a flask, beaker or casserole of a convenient capacity. The form of this vessel is not important so long as it is satisfactory for the saponification.
5. Laboratory thermometer, 0°–150°C.

6. Stirrer, 2-3 mm outside diameter, one end bent in the form of a loop of 19 mm diameter. Glass, nichrome, stainless steel or monel wire may be used. The upper end can be formed to accommodate hand stirring or attached to a mechanical stirrer.

7. Specification for F. A. C. Titer Test Thermometer:

Type: Etched stem, glass.

Liquid: Mercury.

Range and subdivision: 2 to 68°C in 0.2°.

Total length: 385 to 390 mm.

Stem shall be constructed of suitable thermometer tubing of either plain or lens front type.

Diameter—plain front type: 6 to 7 mm.

Thickness of stem-lens front type: the cross section of the stem shall be such that it will pass through an 8 mm ring gauge but will not enter a 5 mm slot gauge.

Bulb: Corning normal or equally suitable thermometric glass.

Length: 15 to 25 mm.

Diameter: 5.5 mm to not greater than that of stem.

Distance from bottom of bulb to –2° mark: 50 to 60 mm.

Distance to 68° mark from top of thermometer: 20 to 35 mm.

Length of unchanged capillary between the highest graduation, and the expansion chamber: 10 mm.

Expansion Chamber: To permit heating to at least 85°C. Space above mercury to be evacuated or filled with nitrogen or other suitable gas.

Top finish: glass ring.

Graduation: All lines, figures and letters to be clear-cut and distinct. Each degree mark to be longer than the remaining lines. Graduations to be numbered at zero and at each multiple of 2 degrees.

Immersion: 45 mm.

Marking: "FAC Titer Test," a serial number and the

manufacturer's name or trade mark shall be etched on the stem. The words "45 mm immersion" shall also be etched on the stem, and a line shall be etched around the stem 45 mm above the bottom of the bulb.

Scale error: The error at any point on the scale shall not exceed 0.2°C.

Standardization: The thermometer shall be standardized at the ice point and at intervals of approximately 20°, for the condition of 45 mm immersion, and for an average stem temperature of the emergent mercury column of 25°C.

Case: The thermometer shall be supplied in a suitable case on which shall appear the markings "FAC Titer Test," "–2° to 68°C in 0.2°."

Note: For the purpose of interpreting these specifications, the following definitions apply:

The total length is the over-all length of the finished instrument.

The diameter is that measured with a ring gauge or micrometer.

The length of the bulb is the distance from the bottom of the bulb to the beginning of the enamel backing.

The top of the thermometer is the top of the finished instrument.

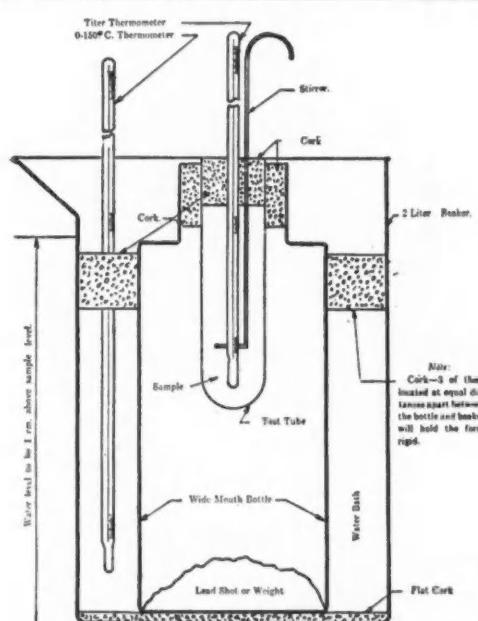


Figure 110. Titer Test Assembly, A.O.C.S.

SOLIDIFICATION OF FATTY ACIDS

1. Fill and adjust the temperature of the water bath. The temperature of the water should be 20°C for all samples having titers of 35°C or higher, and 15° to 20°C below the titer point for all samples with titers below 35°C. The water level should be 1 cm above the sample level.

2. Place the test tube containing the fatty acids in the assembly as shown in the drawing. Insert the titer thermometer to the immersion mark so that it will be equidistant from the sides of the tube.

3. Stir with the stirring rod, in a vertical manner, at the rate of 100 complete up and down motions per minute. The

stirrer should move through a vertical distance of about 3.8 cm. The stirring may be performed by mechanical means by attaching a small motor with suitable reducing gears to the stirring rod. The agitation should be started while the temperature is at least 10°C above the titer point.

4. Stir at the directed rate until the temperature remains constant for 30 seconds, or begins to rise in less than a 30-second interval. Discontinue stirring immediately and observe the increase in temperature. Report as the titer the highest point reached by the thermometer. Duplicate determinations are normally expected to agree within 0.2°C.

P-135—TURBIDITY

Many of the recognized methods can be used. Thus, a Nesslerimeter (Figure 5) a Hellige Turbidity Meter (Figure 7) or a Jackson Cardle Turbidimeter may be used. In each case, a column of fluid is observed from the top and the degree of turbidity is compared to some established standard.

In actual use the glass cylinder is filled to predetermined height and observed under certain definite conditions of illumination. Nessler tubes properly illuminated may also be used.

P-136—ULTRA-VIOLET STABILITY

Apply the nail enamel to white glass plates, drying in air for 30 minutes. Mask the upper half of each color film tested with thick paper or other opaque object. Place under the direct rays of the ultra-violet light from a horizontal quartz mercury arc, laboratory model (10 inch Uviarc), at a distance of 10 inches. Expose for varying lengths of time alongside of standard usually from 15 minutes to 4 hours. Degree of discoloration is noted as bad, moderate or none. Also note if other imperfections develop in film exposed to ultra-violet light.

P-137—UNIVERSAL BUFFER

(*Biochem, Ztg.*, 299, 416, 1938—translated by H. J. Prebluda, U. S. Industrial Chemicals, Inc.)

FOR THE pH REGION 2.0 TO 12.0

A universal buffer solution with a practically constant buffering capacity, surface tension and cation content in the pH region from 2.0 to 12.0 may be made as follows: Mix 100 cc N NaOH with 100 cc of N citric acid and 100 cc of N phosphoric acid; add 3.54 grams of crystalline boric acid and 343.0 cc of N NaOH and dilute to 1000 cc with CO₂-free water (distilled). By adding the amount of 0.1 N hydrochloric acid indicated in the table to 20 cc of this buffer and bringing up the mixture to 100 cc with CO₂-free distilled water, solutions of any pH from 2 to 12 may be obtained.

INGREDIENTS

Normal Sodium Hydroxide (CO₂-free). 58 cc of a saturated solution of sodium hydroxide is diluted to one liter with CO₂-free water. A somewhat less accurate solution may be prepared by weighing 40 grams of solid sodium hydroxide per liter (generally it is necessary to make a 2 percent overweight of the salt in order to compensate for its water content). In any case the strength of the alkali is

controlled by titration with standardized hydrochloric acid.

Phosphoric Acid (Sp. Gr. 1.70). 35 cc of 85 percent phosphoric acid is diluted to a liter. The titre of this solution is obtained by titration against 20 cc of the sodium hydroxide solution described above. Phenolphthalein is used as an indicator and the titration is carried to the point where the red has disappeared and there is the faintest discernible pink color. It is not always easy to see the end point but it is possible to reproduce it.

Citric Acid. 70 grams of crystalline citric acid is dissolved in water and made up to one liter. The exact titre of the solution is determined as in the case of the phosphoric acid. In this case the color change of the phenolphthalein is very sharp.

Boric Acid. Crystallized.

0.1 Normal Hydrochloric Acid. An acid solution of known strength may be prepared by the constant boiling method (described by Hulett and Bonner). 18.019 grams of the acid which distills at 760 mm mercury is diluted to one liter. In case of 0.1 Normal hydrochloric acid is already available it is necessary to take note of the factor in case the acid is used for the preparation of the buffers.

TABLE I3

pH	.00	.10	.20	.30	.40	.50	.60	.70	.80	.90
2	73.30	70.35	67.85	65.70	63.85	62.25	60.80	59.55	58.45	57.40
3	56.50	55.70	54.95	54.30	53.70	52.20	52.65	52.10	51.55	51.02
4	50.50	49.97	49.45	48.90	48.35	47.80	47.26	46.75	46.22	45.68
5	45.18	44.60	44.05	43.50	42.94	42.36	41.80	41.23	40.61	40.00
6	39.42	38.74	38.09	37.45	36.74	36.06	35.36	34.65	33.92	33.25
7	32.65	31.98	31.45	30.83	30.35	29.87	29.43	29.05	28.68	28.33
8	28.02	27.69	27.45	27.25	26.90	26.60	26.10	25.63	24.90	24.33
9	23.75	23.05	22.38	21.72	21.12	20.52	19.94	19.37	18.81	18.35
10	17.92	17.43	16.97	16.64	16.36	16.15	15.95	15.70	15.40	15.02
11	14.52	13.93	13.20	12.30	11.23	10.00	8.40	6.60	4.70	2.60
12	0.40									

Example: To make up a solution of pH 6.70 add 34.65 cc of 0.1 N hydrochloric acid to 20 cc of the basic solution and bring up to 100 cc with water.

MATERIAL	KOLMAR LABORATORIES	
	ANALYSIS AND RAW MATERIAL CONTROL (FATS, OILS AND WAXES)	
SOURCE—	PRICE—	F.O.B.
Date of Shipment		
Color		
Odor and Taste		
Water Content		
Acid No.		
Melting Point		
Softening Point		
Viscosity		
Cloud Point		
Flash Point		
Specific Gravity Value		
Acetyl Value		
Iodine Value		
Index of Refraction		
Analyst:		
Approved By		

MATERIAL	KOLMAR LABORATORIES	
	ANALYSIS AND RAW MATERIAL CONTROL (COLORS AND POWDERED BASE MATERIALS)	
SOURCE—	PRICE—	F.O.B.
Date of Shipment		
P. P. M. of Arsenic		
Color		
Tinctorial Strength		
Size of Particles		
Shape of Particles		
Bite Test		
Bulk		
Sip		
Shine Development		
Lime Content		
Solubility in Castor Oil		
Oil Adsorption		
Analyst:		
Approved By		

Figure III. Examples of control cards used at Kolmar Laboratories to check all raw materials before used

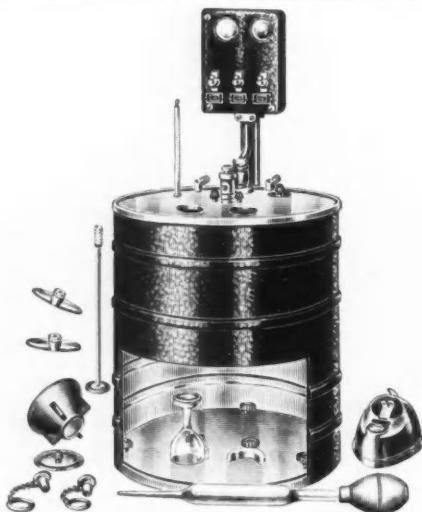
P-138—VISCOSITY, KINEMATIC
(U.S.P.)

Viscosity is a property which is closely related to the resistance to flow of a liquid. It is defined in terms of the force required to move one plane surface past another under specified conditions when the space between is filled by the liquid in question. It can be considered more simply as a relative property where water is the reference material and all viscosities are expressed in terms of the viscosity of pure water at 20°C. The latter quantity is given as (very nearly) one centipoise, and a material ten times as viscous as water at this temperature has a viscosity of ten centipoises. The basic unit is the poise; for convenience, the centipoise (1 poise = 100 centipoises) is employed. The specifying of temperature is important because viscosity usually changes with temperature; in general, viscosity decreases as temperature is raised. While on the absolute scale viscosity is measured in poises or centipoises, it is more convenient to use the kinematic scale, in which the units are stokes and centistokes (1 stoke = 100 centistokes). The kinematic viscosity is obtained from the absolute viscosity by dividing the latter by the density of the liquid at the same temperature.

$$\text{Kinematic viscosity} = \frac{\text{absolute viscosity}}{\text{density}}$$

The sizes of the units are such that viscosities in the ordinary ranges are conveniently expressed in centipoises and centistokes. The magnitude of the viscosities of some common liquids at room temperature may be indicated by the following relative figures:

Substance	Approximate viscosity in centistokes
Ether	0.2
Purified Benzin	0.6
Water	1
Kerosene	2.5
Liquid Petroleum	20-70
Honey	10,000



Courtesy, Precision Scientific Instrument Co.
Figure 112. Precision Universal Saybolt Viscosimeter, Two Unit

Viscosity can be determined by any method which will measure the resistance to shear offered by the liquid. For

ordinary liquids, it is customary to determine the time required for a given sample of the liquid to flow, at a regulated temperature through a small capillary tube, and to compare this time with that required by the reference liquid, such as water. If the viscosity of the reference liquid



Figure 113. Fisher MacMisheal Viscosimeter

is known, the kinematic viscosity of the unknown liquid may be calculated simply. Many capillary tube viscosimeters have been devised; nearly all are modifications of the Ostwald type.

Viscosity for commercial products is often expressed on arbitrary scales, and measured by empirical methods in special instruments. Thus semi-solids are often examined by so-called rotary instruments, which measure the resistance to rotation of a cylinder, placed concentrically within another, the annular space being filled with the sample. The viscosity of oils is expressed on arbitrary scales, which vary from one country to another, there being several corresponding instruments. The most widely used are:

England	Redwood No. I and No. II
Germany	Engler
United States	Saybolt Universal
	Saybolt Furrol

The Redwood No. II and the Saybolt Furrol are designed for use with extremely viscous oils. This is done by providing a wider capillary for the measurement; the Saybolt Furrol readings are approximately one-tenth those obtained on the same oil with the Saybolt Universal. Results for all the instruments are expressed in seconds of time required for outflow of a standard amount of liquid. Engler readings, however, may be reported as Engler degrees; these latter are obtained by dividing the efflux time for the sample by the corresponding efflux time for water in the same instrument and at the same temperature. Standard temperatures are adopted as a matter of convenience. For the Saybolt instruments, measurements are usually made

at 100° and 210°F. Redwood measurements may be at several temperatures up to 250°F, and Engler degrees are usually reported at 20° and 50°C.

The determination of kinematic viscosity with modern instruments is more rapid and convenient than is the use of the Saybolt and similar equipment. The Ostwald pipette type viscosimeter is, therefore, displacing the metal capillary variety, although the Saybolt, Redwood, and Engler scales have been retained. Kinematic viscosities determined in the Ostwald pipettes are, therefore, converted to Saybolt and similar values by means of equations and conversion charts. (Several types of standard viscosimeters are shown in Figures 112, 113 and 114.)



Figure 114. Schaar Recording Viscosimeter

P-139—VISCOSITY—MOBILOMETER

To set up the instrument (see Figure 26), place the base on a flat table and level it by means of the adjusting screws in the legs. An empty viscosimeter tube is then screwed into the bushing in the center of the brass plate, the plunger bracket then attached and the plunger rod passed through the hole in the upper part of the bracket and a disc attached to its lower end.

The cylinder is then removed, filled with the material to be tested and, if desired, brought to constant temperature in a water or oil bath. Just enough sample should be poured into the cylinder to fill it to the mark. The cylinder is then screwed into the base of the Mobilometer and the plunger rod with disc attached, is lowered into the cylinder until the disc is just immersed in the sample. A small weight pan (the small pan about 2" in diameter with the edges bent upward) is then placed on the top of the plunger rod and the time required for the plunger to fall through the sample is noted with a stopwatch. This time in seconds is the viscosity.

If desired, this procedure may be repeated with the same or a number of different weights on the weight pan and the points plotted on a curve. The more viscous the product, the longer the time consumed; the less viscous, the shorter the time.

For less viscous liquids, the plunger without any holes should be used. For liquids of a medium viscosity, the plunger with the larger number of small holes should be used. For very viscous liquids the plunger with the largest

holes should be used. It might sometimes be advisable to use in addition to any of the discs, a 10 or 20-gram weight placed on the weight pan at the top of the plunger rod to decrease the falling time and so bring the actual number of seconds consumed by any one test down to a reasonable time.

In all this work there is no absolute standard of viscosity. A standard should be established by each company for its various products.

CAUTIONS TO BE OBSERVED IN RUNNING THE TEST

Keep the Mobilometer absolutely level throughout each test.

Be sure that all the orifices in the discs are absolutely clean.

Keep the temperature of the product within plus or minus 1° of the working temperature by means of a water or oil bath if high accuracy is required.

The plunger disc must be covered with the product at all times during the determination.

See that none of the product gets into the rod supporting bracket, thus causing extra friction.

Clean each part of the apparatus immediately after each determination by flushing with a suitable solvent.

P-140—VISCOSITY PIPETTE

Using a Dudley viscosity pipette shown in Figure 115, draw 100 cc of the product to be tested, holding for a minute or two so the glass will come to the temperature of the contents, adjust for volume, then let the product flow out as a stopwatch is simultaneously started. Determine the number of seconds required for the column of product to pass the etched line at the lower end of the pipette. Repeat 3 times and record the viscosity as the number of seconds at the temperature of the product.

This pipette is about 24 inches long, and is made and calibrated to deliver 100 ml. should be determined by the operator. The of water at 60° F. in 30 to 32 seconds. The exact time of delivery of each pipette outlet tip is a tube of uniform diameter, and is ground to a flat end so that the rate of discharge will be constant.



Figure 115. Dudley Viscosity Pipette

P-141—VISCOSITY G-E ZAHN

The usual method of using the G-E Viscosimeter (Figure 116), is to leave it in the liquid material to be tested so it can assume the temperature of the test liquid. To get the viscosity of the liquid, simply lift the cup out of the liquid and start off a stopwatch while the liquid flows out through a precisely drilled orifice at the bottom. Stop the watch when the stream of liquid flowing through the orifice suddenly breaks. The time of flow gives the viscosity in seconds.

P-142—WASHING OFF

*Cream Sunburn Preventive
(OQMG No. 102, Oct. 11, 1943)
(Tentative Specifications)*

F-3c. Resistance to washing. Fit a small nozzle contain-

ing approximately 20 holes, each 0.035 inches in diameter (drill No. 65), to a 6-inch laboratory funnel, by means of suitable tubing. Support funnel with a ring support so that



Figure 116. G-E Zahn Viscosimeter

lower surface of spray nozzle is six inches above the surface of skin on which test is to be made. (The inside of the forearm may be used.) Flow tap water at approximately 80°F into funnel at such a rate that water level is maintained approximately one inch below top of funnel. Allow spray from nozzle to fall for 5 minutes upon skin coated evenly with 2.5 milligrams of cream per square centimeter. Allow skin to dry. Protection against burning rays measured on skin so treated shall not be less than 75 percent of that found in paragraph F-3a (P-127) when tested as described in paragraph F-3a.

F-3d. Soapy water. Mix sufficient sienna, ochre or umber with a portion of cream so that latter is decidedly darker than the skin to which it will be applied. Rub a moderately heavy portion of this pigmented cream onto an area of pale skin. Using distilled water or tap water at approximately 50°F and floating toilet soap conforming to or similar to Federal Specification P-S-616, wash skin which has been covered with pigmented cream. Thorough removal of cream is indicated by disappearance of all color due to pigmented cream.

P-143—WATER ABSORPTION TEST

(*Atlas Powder Company Method*)

To determine the water holding power of absorption bases and other emulsifiers, the following test has been developed.

Water is stirred into 100 grams of base until no more is absorbed. The data are expressed as the maximum weight of water absorbed by 100 grams of sample. The following figures were obtained with various materials:

Product	Water Absorbed
Base A	1465 Grams
Base B	1100 Grams
Base C	1935 Grams
Base D	1170 Grams
Lanolin Anhydrous	1230 Grams

EQUIPMENT

Mixmaster with small bowl

2 L beaker

Large spatula

Watch glass

White Perfecta No. 1 Petrolatum (L. Sonneborn Sons, Inc., 88 Lexington Ave., N. Y.)

METHOD

On a watch glass weigh out 27.0 g petrolatum and 3.0 g emulsifier. Measure out 1,000 cc distilled water into 2 L beaker and heat to 50°C (water should be between 40-50°C during test).

Heat up Mixmaster bowl in water gradually to 50°C.

Transfer sample and petrolatum to bowl and mix up with spatula and then put under mixer.

Add water gradually—in about 5 cc increments—at the rate of about 40 cc per minute.

Keep bowl spinning and occasionally work from sides of bowl into center with spatulas.

Near end point the emulsion starts to flake at the beaters and at the end point you can hear the water beating up.

To check end point, work the charge into center of bowl with spatula, turn off agitator and examine charge next to bowl—should be excess water present when you push the emulsion away from the sides of bowl with the spatula.

Finally, pour out as much excess water as possible from bowl and measure up the unused water.

$$\text{Absorption No.} = \frac{\text{cc water absorbed} \times 10}{3} = \text{grams of water absorbed by } 100 \text{ g of base (or } 10 \text{ g of ester)}$$

Duplicate determinations should agree within 100-150 points.

P-144—WATER IN CREAMS

Place about 25 grams cream in 250 cc round bottom flask. Cover with 100 cc toluene. Add a few pieces broken glass or porous granules to prevent bumping. Reflux one hour, using a Dean-Stark tube as in Figure 117. Note number of cc water in Dean-Stark tube.

$$\% \text{ water} = \frac{\text{cc water in tube} \times 100}{\text{weight sample}}$$

P-145—ALTERNATIVE METHOD FOR WATER AND OTHER COMPOUNDS VOLATILE AT ABOUT 100°C IN SULFONATED (SULFATED) OILS

Hot Plate Method (A.O.C.S.)

1. *Scope.* This method of test determines water and other compounds volatile at about 100°C existing in a

sample of sulfonated (sulfated) oil by rapid evaporation. The method applies only to the sulfonated oils that do not

Water Determination Apparatus, for the determination of water in petroleum products and bituminous materials, according to "A.S.T.M. Standard Methods," Serial Designation D 95-30. This apparatus consists of a round bottom, short-necked, Pyrex glass flask of 500 ml. capacity; a glass Liebig condenser with sealed jacket 400 mm. long, and with the outlet tube ground to a 60° angle; a glass trap graduated from zero to 10 ml. in 0.1 ml. subdivisions. This apparatus can be mounted with the usual laboratory supports.

Courtesy, Precision Scientific Instrument Co.

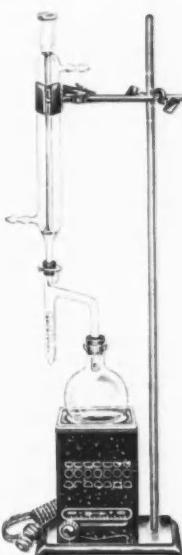


Figure 117. Water Determination Apparatus

contain the following: mineral acids, free sulfonic acids, or free sulfuric acid esters; ammonia, acetic acid or similar volatile acids; sodium acetates or similar salts which may react with oleic acid at elevated temperatures liberating volatile acids; or glycerol, diethylene glycol, acetone, or other water-miscible volatile compounds.

APPARATUS

2. General. The apparatus shall consist of a glass-stoppered weighing flask and a glass beaker, heated by suitable means and provided with a suitable thermometer.

3. Weighing Flask. Any suitable glass-stoppered weighing flask of 10 to 15 ml capacity shall be used.

4. Heat Source. An electric hot plate, with or without asbestos paper or board cover, or an open flame under a suitable asbestos board and a wire gauze (to spread the heat) shall be the source of heat.

5. Beaker. The beaker shall be a Griffin-low-form glass beaker with an approximate capacity of 150 ml and a diameter of about 5 cm.

6. Thermometer. The thermometer shall be about 3 inches long, graduated from 90° to 150°C, and substantially constructed.

REAGENTS

7. Oleic Acid. The oleic acid shall be the U.S.P. grade.

8. Desiccating Agent. Any suitable desiccating agent shall be used.

Note: Recent investigations seem to indicate that calcium chloride is unreliable as a laboratory desiccating agent.

PROCEDURE

9. Procedure. Approximately 5 grams of oleic acid shall be weighed into the beaker in which the thermometer is also placed. The oleic acid shall now be heated gradually, while stirring with the thermometer, until the temperature is 130°C. The beaker shall then be placed in an oven at 105° to 110°C for 15 minutes, cooled in a desiccator, and

weighed. The heating over the hot plate and in the oven shall be repeated until two contiguous weighings differ by less than 15 mg.

About 6 grams of the sample shall be introduced into the weighing flask, weighed exactly, the contents emptied into the beaker (containing the thermometer), and the flask weighed again. The mixture shall now be heated exactly as in the taring of the beaker, etc.

10. Calculation of Results. The loss in weight of the contents in the beaker divided by the weight of the sample and multiplied by 100 shall be the percentage of water and other volatile compounds at about 100°C and shall be reported as "... percent water and other volatile compounds at about 100°C by weight, A.O.C.S. hot-plate method."

ACCURACY

11. Accuracy. The accuracy to be expected with this method is that duplicate determinations of water and other compounds volatile at about 100°C should not differ from each other by more than 40 mg or 0.4 percent on a 5-gram sample.

P-146—WATER IN SULFONATED (SULFATED) OILS

Distillation Method (A.O.C.S.)

1. Scope. This method of test determines water existing in a sample of sulfonated (sulfated) oil by distilling the sample with a volatile solvent. It applies only to sulfonated oils that do not contain the following: mineral acids, free sulfonic acids, or free sulfuric acid ester; or alcohol, glycerol, diethylene glycol, acetone, or other water-miscible volatile compounds.

APPARATUS

2. General. The apparatus shall consist of a glass flask heated by suitable means and provided with a reflex condenser, discharging into a trap and connected to the flask.

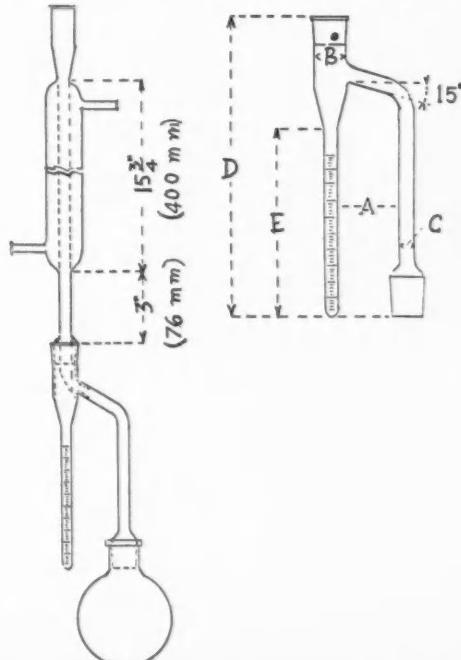


Figure 118. A.O.C.S. Water in sulfated oils apparatus, showing details of trap

The connections between the trap and condenser and flask shall be ground joints. The trap serves to collect and measure the condensed water and to return the solvent to the flask.

Before use, the condenser and the receiving tube shall be thoroughly cleaned with soap and warm water, rinsed well, then treated with hot cleaning solution (a mixture of 10 ml of saturated potassium bichromate and 990 ml of concentrated sulfuric acid), and finally thoroughly washed and dried.

3. *Flask.* The glass flask (Fig. 118) shall be of the short-neck round-bottom type, made of well-annealed glass, having an approximate capacity of 500 ml.

4. *Heat Source.* An oil bath (stearic acid, paraffin wax, etc.), or an electric heater provided with a sliding rheostat shall be used as the source of heat.

5. *Condenser.* The condenser (Fig. 118) shall be of the water-cooled, reflux, glass-tube type, having a condenser jacket not less than 400 mm (15.75 inches) in length with an inner tube 9.5 to 12.7 mm (0.375 to 0.5 inch) in outside diameter. The end of the condenser to be inserted in the trap shall extend about 7 mm (0.25 inch) above the surface of the liquid in the trap after the distillation conditions have been established.

6. *Trap.* The trap shall be made of well-annealed glass constructed in accordance with Figure 118, and shall be graduated as shown from 0 to 5 ml in 0.1 ml divisions. The error of any indicated capacity shall not be greater than 0.05 ml.

REAGENTS

7. *Solvent.* The solvent used shall be C. P. xylene.

8. *Oleic Acid.* The oleic acid used shall be the U. S. P. grade, and previous to use shall be heated for 5 to 10 minutes over a free flame at a temperature of 130° to 135° C.

CALIBRATION

9. *Calibration.* To calibrate the apparatus, 1 gram of water shall be added to a mixture of 80 grams of xylene and 10 grams of oleic acid. The distillation shall be conducted as under procedure below. When all the water is over, the apparatus shall be cooled, another gram of water added, and the distillation repeated. The calibration shall be continued up to the capacity of the receiving tube.

PROCEDURE

10. *Procedure.* Enough of the sample to be tested shall be taken for analysis to yield about 4 ml of water. The approximate quantity shall be introduced into a weighing bottle, from which the weighings into the flask shall be made, care being taken that after removal of the sample no drops of oil are left on the outside of the bottle. Eighty grams of xylene and oleic acid equal to about two and one-half times the weight of the bone-dry sample shall be added, glass beads introduced to prevent bumping, and the contents thoroughly mixed by swirling, proper care being taken to avoid any loss of material. The flask shall then be immediately connected with the distillation apparatus. The oleic acid is necessary to prevent foaming and jelling of the contents in the distillation flask. A loose cotton plug shall be inserted in the top of the condenser tube to prevent condensation of atmospheric moisture in the condenser tube.

Heat shall then be applied and so regulated that the con-

denser tube immediately below the water jacket shall be just barely hot. In this way a minimum of water condenses higher in the condenser, where it is difficult to volatilize.

The distillation shall be continued at the specified rate until practically no water is visible on any part of the apparatus except on the bottom of the trap. This operation usually requires less than an hour. The rate of distillation shall then be increased to remove all traces of condensed water in the condenser tube, and the distillation continued until the water level in the trap remains unchanged after a 10-minute interval. Any droplets adhering to the sides of the receiver shall be dislodged with a thin copper wire twisted into a loop. The receiving tube shall now be immersed in warm water at about 40°C for 15 minutes, or until the xylene layer becomes clear, when the exact reading and temperature shall be taken.

11. *Calculation of Results.* The volume of condensed water measured in the trap and converted into grams by means of Table 14, divided by the weight of the sample used and multiplied by 100 shall be the percentage of water and shall be reported as ". . . percent water by weight, A.O.C.S. distillation method."

ACCURACY

12. *Accuracy.* The accuracy to be expected with this method is that duplicate determinations of water should not differ from each other by more than 0.05 ml.

13. *Density of Water.*

TABLE 14

Relative Density of Water (Smithsonian Tables, compiled from various authors)			
Temperature °C.	Density	Temperature °C.	Density
4	1.00000	40	0.99224
35	0.99406	41	0.99186
36	0.99371	42	0.99147
37	0.99336	43	0.99107
38	0.99299	44	0.99066
39	0.99262	45	0.99025

P-147—WATER DISPERSIBILITY

Place a gram of unknown and standard powder in a 150 mm test tube, add 10 cc of distilled water and shake for 25 shakes, being careful to shake with equal force. Observe any difference in wetting of pigments, settling, color of water layer and amount of powder floating on top of the water.

P-148—WATER RESISTANCE

(A. A. T. C. C. Method)

Use a tester of the type illustrated in structural detail in Figure 119. To insure uniformity, a supply of spray heads, embroidery hoops and copies of the rating chart reproduced in Figure 120 will be maintained by the Association. They may be purchased by writing to Dr. H. C. Chapin, Lowell Textile Institute, Lowell, Massachusetts.

Cut out a 7 x 7 inch sample of the fabric to be tested and fasten it securely in the six-inch metal hoop. (Note: A suitable metal hoop is an embroidery hoop of the kind obtainable at "Dime" stores.) Support the hoop on the stand of the tester so that the fabric is uppermost. The hoop should be so placed on the stand that the center of the spray pattern coincides with the center of the hoop. In the case of twills, gabardines, piques or fabrics of similar ribbed construction, the hoop holding the fabric should be

placed on the stand in such a way that the ribs are diagonal to the flow of water running off the fabric sample.

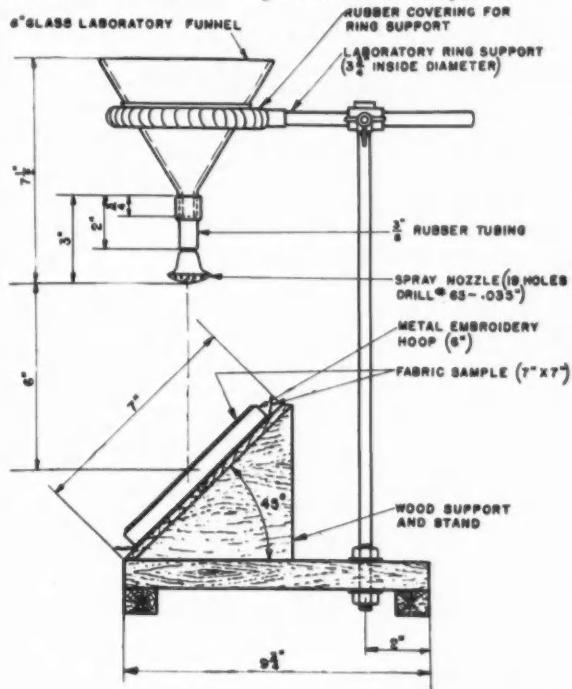


Figure 119. A.A.T.C.C. Instrument for testing water repellency of fabric

Pour 250 cc of water at $80^{\circ} \pm 1^{\circ}\text{F}$ from a cup or other suitable container into the funnel of the tester, and allow it to spray onto the fabric. The duration of spraying will be approximately 25-30 seconds.

At the completion of the spraying period, hold one edge

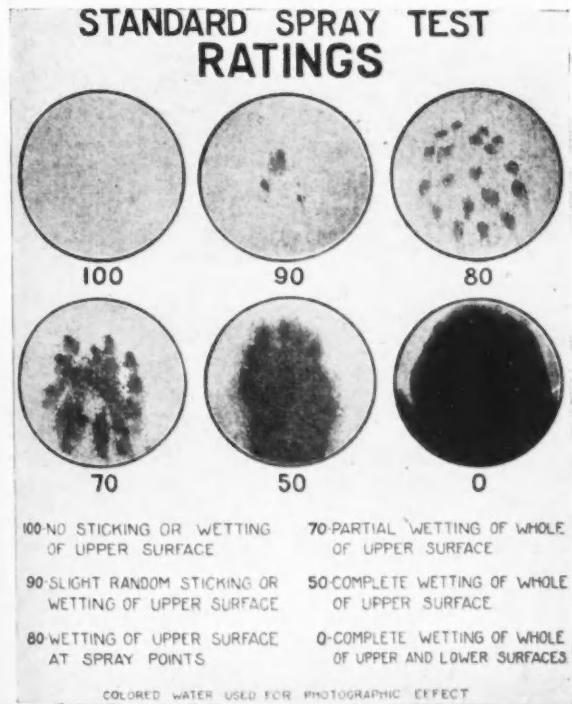


Figure 120. A.A.T.C.C. Standard Spray Ratings

of the hoop and tap the opposite edge smartly once against a solid object (the fabric on the hoop shall face this object), then rotate the hoop and tap once more at the point previously held.

After tapping, compare the spotted or wetted pattern with the standards reproduced in Figure 120. Assign the fabric a rating corresponding to the nearest standard. Do not attempt to assign the fabric a rating intermediate between the standards. In rating a light, porous fabric, such as a voile, disregard any passage of water through the fabric due to its open construction.

A quantitative evaluation of this type is being studied along the lines of the American Society for Testing Materials test. (D583-40T. 1940.)

CHEMICAL METHODS

The chemical methods described hereafter have been taken from many sources. Some have been used for years in the author's laboratory, while permission has been granted to quote others from the U.S.P. XII, the Official and Tentative Methods of Analysis of the A.O.A.C. (1940), N.F. VII, Toilet Goods Association Standards, Official Methods of the A.O.C.S., Merck Index, Methods of Analysis of the A.A.T.C.C. (1940) together with abstracts from the trade and scientific literature.

Following the pattern of the physical methods of testing, all chemical methods will be preceded by the letter "C" and will be consecutively numbered. Special methods of testing will appear in later chapters describing the particular cosmetic under analysis.

Introducing chemical methods are two sets of microchemical tests. They work well and are separately mentioned because of their unique character. It goes without saying that a microscope is necessary to carry on the tests. It is always well to do the test with a *known* before trying the unknown sample. Include probable interfering substances in the known so as to see the crystal formations as they may occur under practical conditions.

TABLE 14
CHARACTERISTICS OF MICROCHEMICAL TESTS
FOR ALKALOIDS

ALKALOID	REAGENT	DESCRIPTION OF CRYSTALS
Benzocaine	Potassium ferrocyanide	1.100 in dilute HC ¹ . Colorless, irregular plates and rods. Long masses of transparent, rectangular plates; also rosettes of thin plates.
Brucine	Potassium Iodide	Small dense rosettes. Long, brown radiating and interlacing needles.
Ephedrine	Mercuric chloride Kraut's	1:100 Spheres of radiating crystals. Shake slide to start crystallization. Avoid excess reagent.
Hydrastine	One drop of 5% HC ¹ and Potassium ferrocyanide	Crystals form slowly: layers of thin, yellow, triangular plates of delicate structure. Spherical crystals of radiating branches. Irregular, radiating branches.
Pilocarpine	Platinic chloride	Gold chloride and hydrochloric acid
Procaine hydrochloride	Platinic chloride	Disodium phosphate
Quinine	Platinic chloride	Silvery, sheaf-like crystals.

Selected fluorescent reactions follow the microchemical tests, although other fluorescent reactions will be given under each heading. Fluorescent tests should always be substantiated by other tests because of the difficulty the

average analyst has in distinguishing between the shadings of colors produced. Oftentimes a fluorescent test will clinch proof established by other methods. In the hands of an expert, fluorescent testing is an exceedingly valuable tool. Suitable sources of ultra-violet light are shown in figure 40, although more elaborate equipment is available.

C-1—MICROCHEMICAL TESTS FOR ALKALOIDS— OFFICIAL OR TENTATIVE

REAGENTS (A.O.A.C.)

1. *Potassium iodide solution*—Dissolve 5 grams of KI in 100 ml of H₂O.
2. *Gold chloride solution*—Dissolve 1 gram of gold chloride in 20 ml of H₂O.
3. *Hydrochloric acid*—5%.
4. *Potassium ferrocyanide solution*—Dissolve 5 grams of K₄Fe(CN)₆·3H₂O in 100 ml of H₂O.
5. *Mercuric chloride solution*—Dissolve 5 grams of HgCl₂ in 100 ml of H₂O.
6. *Platinic chloride solution*—Dissolve 5 grams of H₂PtCl₆·6H₂O in 100 ml of H₂O.
7. *Disodium phosphate solution*—Dissolve 5 grams of Na₂HPO₄·12H₂O in 100 ml of H₂O.

PREPARATION OF SAMPLES

- (a) *Controls*—Dissolve 1 mg of the pure alkaloidal salt in 2 drops of H₂O to make an approximately 1:100 solution.
- (b) *Alkaloids in compounds*—Separate the alkaloid in pure form by extracting it from ammoniacal solution with a suitable immiscible solvent, and evaporate the solvent. To 1 mg of the residue add, dropwise 0.1 N HCl, avoiding an excess of acid, and dilute with H₂O, if necessary, to

approximately the same alkaloidal concentration as is specified in (a).

IDENTIFICATION

Place a drop of the alkaloidal solution on a clean glass slide, add a drop of reagent by means of a clean glass rod, and without stirring or covering examine under microscope, using low power. A magnification of 100-150 is suitable. Note kind of crystals formed and compare their characteristics with descriptions given and also with a control.

C-2—MICROCHEMICAL TESTS FOR SYNTHETICS—OFFICIAL

REAGENTS (A.O.A.C.)

1. *Phosphotungstic acid soln.*—Dissolve 5 grams of P₂O₅·24WO₃·XH₂O in 100 ml of H₂O.
2. *Bromide-bromate soln.*—Dissolve 0.3 grams of KBrO₃ and 1.2 grams of KBr in H₂O and dilute to 100 ml.
3. *Silver nitrate soln.*—Dissolve 1 gram of AgNO₃ in 20 ml of H₂O.
4. *Potassium ferrocyanide soln.*—Dissolve 5 grams K₄Fe(CN)₆·3H₂O in 100 ml of H₂O.
5. *Lead triethanolamine soln.*—Add 1 ml of triethanolamine (tech. 90% is satisfactory) to a solution of 1 gram of neutral Pb acetate in 20 ml of H₂O. A slight turbidity does not interfere.
6. *Zinc pyridine soln.*—Add 1 ml of pyridine to a solution of 1 gram of Zn acetate in 20 ml of H₂O.
7. *Silicotungstic acid soln.*—Dissolve 5 grams of 4H₂O·SiO₂·12WO₃·22H₂O in 100 ml of approximately 6 N H₂SO₄.
8. *Magnesia mixture*—Dissolve 55 grams of MgCl₂·6H₂O

TABLE 15
CHARACTERISTICS OF MICROCHEMICAL TESTS FOR SYNTHETICS

Synthetic	Solvent	Concentration of Synthetic	Reagent	Description of Tests and Crystals
Acetanilid	10% HCl 10% HCl	1:100 1:100	Phosphotungstic acid Bromide-bromate soln	Rosettes of prisms. Small prisms.
Antipyrine	H ₂ O	1:100	Potassium ferrocyanide	Acicular and prismatic crystals form after a drop of 1% HCl is added.
Benzoic Acid	Dry powder	...	Lead triethanolamine	Stir a small quantity of the synthetic into a drop of reagent. Stir thoroughly to induce crystallization. 4-sided plates, singly and in groups.
	Dry powder	...	Zinc pyridine	Stir a small quantity of synthetic into a drop of reagent. Stir thoroughly to induce crystallization. Hexagonal crystals.
Hydroxy quinoline sulfate (Chinosol)	Dissolve the salt in H ₂ O. If free base, dissolve in 10% HCl, avoiding excess	1:500	Magnesia mixture	Small, elliptical grains. Few burr-shaped crystals on standing.
Methenamine	H ₂ O	1:500	Silicotungstic acid	Thin transparent, rectangular crystals.
Salicylic acid	Dry powder	10% HCl	Bromide-bromate soln.	Stir a few crystals of the synthetic into a drop of the HCl. Add a drop of the bromide-bromate soln. Fine needles appear to grow from the crystals of salicylic acid.
	Dry powder	...	Lead triethanolamine	Stir a few crystals into a drop of the reagent. Rods or needles grow from the crystal of salicylic acid.
	2% triethanolamine	1:100 to 1:200	Silver nitrate	Small irregular plates; a few short rods.
Triethanolamine	H ₂ O	1:100	Kraut's	Oily globules changing to large red hexagonal plates and prismatic crystals.

and 140 grams of NH_4Cl in H_2O . Add 130.5 ml of NH_4OH and H_2O to make 1 liter.

9. *Kraut's Reagent*—Dissolve 8 grams of $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$ in 20 ml of HNO_3 , sp. gr. 1.18. Dissolve 27.2 grams of KI in 50 ml of H_2O . Mix the solutions and dilute to 100 ml.

PREPARATION OF SAMPLES AND IDENTIFICATION

Observe the notes under Microchemical Tests for Alkaloids just preceding. In general the same remarks apply for synthetics as for alkaloids excepting for the use of an alkaline solution for the extraction of the synthetic. The proper conditions for extraction will be described under headings describing the substance under test.

C-3—SOME NEW FLUORESCENCE REACTIONS

(*The Analyst* 69, 15-16, 1944)

A 0.001% solution of acenaphthene-5-carboxylic acid in concentrated sulfuric acid gives a strong greenish-yellow fluorescence in ultra-violet light when gently heated with formaldehyde. To carry out the test, put 0.1 ml of test solution in a small test-tube, add 1 ml of reagent, mix and heat until the liquid begins to darken. Leave for 2 minutes, cool, examine under the ultra-violet lamp, then dilute with 4 ml of water, cool and re-examine. In presence of 4 micrograms of formaldehyde in 0.1 ml of test solution a dull greenish-yellow and a greenish-yellow fluorescence are observed in the concentrated and diluted liquids, respectively. Other aldehydes do not react, nor do the various natural gums and carbohydrates, dextrins, monohydric alcohols or formic, citric or oxalic acid. Tartaric acid, carbitol, glycerin and ethylene glycol give a similar reaction when 0.1 ml of a 0.1% solution is taken for the test, and with these compounds the examination of the concentrated reaction mixture is of some assistance in distinguishing between them, as they show yellowish-blue, bright, slightly greenish-yellow and a golden-yellow fluorescence, respectively. The fluorescence colors shown on dilution are all similar to that given by formaldehyde.

TABLE 16

Substance	Concentrated Reaction Mixture	Diluted Reaction Mixture
Formaldehyde	Bright greenish-yellow	Strong, deep greenish-yellow
Citric Acid	Bright, strong yellow-green	Bright greenish-yellow
Gum Senegal or arabic	Dull reddish-brown	Strong, dull bluish-green (like lubricating oil)
Gum tragacanth	Bright greenish-yellow	Weak greenish-yellow
Gum ghatti	Strong greenish-brown	Powerful bluish olive-green
Manucol V (Alginate)	Bright yellow	Very faint milky blue
Carbitol	Powerful yellowish-green	Weak milky blue

C-4—CARBONYL GROUP, COMPOUNDS CONTAINING, DETECTION OF

(*Alan H. Ware, Chem. & Drug.*, Feb. 3, 1934)

In addition to the fluorescences two other distinctive types of result may be obtained, viz.:

(a) Chromogens are produced which in acid solution have little or no color. These chromogens can usually be shaken out with ether, and if the ethereal layer be then shaken with sufficient very dilute ammonia, a rich pink to purple color is produced, which in the case of levulose and levulose-yielding carbohydrates is very intense, bears much dilution and may persist for an hour or more, but ultimately changes to a brown. Dihydroxyacetone gives an even better result, but dextrose and other carbohydrates not yielding levulose and also vanillin give an inferior but quite definite result.

(b) Distinctively colored precipitates or solutions are given at the acid stage. In some cases these are associated with the other distinctive results already described, in other cases they are quite independent of such results.

Method of Testing—0.05 gm of the substance to be tested with 0.1 gm of resorcinol is heated in 4.5 ml of 10 per cent aqueous hydrochloric acid to boiling point, but the boiling is not continuous for more than a few seconds. If no color develops the test is repeated using 20 per cent acid and reversing the proportions of the reacting substances, using more prolonged boiling if necessary. In either case the mixture is diluted with an equal quantity of water, cooled and shaken out with ether. The ethereal layer is then removed and shaken with a little 10 per cent aqueous ammonia and immediately rapidly diluted by adding portions of water alternately with shaking until the maximum intensity of color is obtained, if any.

Aldehydes of Simple Type—Acetaldehyde, paraldehyde and benzaldehyde give a copious yellow precipitate when boiled with resorcinol in 10 percent aqueous hydrochloric acid. On adding to aqueous ammonia the precipitate remains insoluble but changes in color to a rich pink or vermillion.

Acetone is distinguished from the above by giving no precipitate in 10 percent HCl, but in concentrated acid a copious yellow precipitate falls which dissolves in alcohol or alkalis without any distinctive change of color. Gives a good fluorescence to the method in which 80 percent sulfuric acid is used.

Citric Acid—When heated with resorcinol in 80 percent sulfuric acid, the citric acid being used in excess of the resorcinol, pale pink replaced by pale brown or brownish-yellow are given, the mixture becoming almost colorless when diluted with a little water. On adding to the aqueous ammonia an intense blue fluorescence is given. Nothing else tested by the writer gives this result.

Lactic Acid gives a good fluorescence (green) to both methods indicated, but best to 80 percent sulfuric acid, and in the latter case a rich reddish color is developed during the heating at the acid stage. If concentrated sulfuric acid be substituted a brown color and no fluorescent principle is produced.

Tartaric Acid gives a good red color at the acid stage and a rich green fluorescence at the ammonia stage, if the method with 80 percent sulfuric acid is used, but not to that with phosphoric acid. If 98 percent sulfuric acid is used in a dry tube better carmine color is given at the acid stage, but no fluorescence is then given to ammonia.

Camphor gives to the method with 80 percent sulfuric acid a yellow solution at the acid stage but a rich green fluorescence at the ammonia stage. Nothing of value is given to the other tests.

Eugenol gives a rich green fluorescence to both methods. With the 80 percent sulfuric acid method a rich red is developed at the acid stage on warming. Nothing distinctive is given to the methods with hydrochloric acid.

Formaldehyde—Two drops of the 40 percent solution added to 4-5 cc of water to which one drop per cc of 10 percent hydrochloric acid has been added gives, on raising to the boiling point, cooling and again raising to the boiling point, a precipitate, at first white but becoming pink, which is insoluble in alcohol or aqueous alkali. This test if carried out as stated appears to be quite specific for formaldehyde.

Glycerin gives the green fluorescence to both methods but no distinctive color-reaction at the acid stage and

nothing to the methods with hydrochloric acid.

Vanillin—Magnificent fluorescences are given at the ammonia stage to both methods, and rich pink, red or vermillion colors at the acid stage.* When phosphoric acid is used, if the mixture after heating at the acid stage be shaken out with either ether or amyl alcohol, a chromogen or chromogens (colorless in ether, yellow in amyl alcohol) will be removed, which will give a rich pink color on shaking with very dilute ammonia. This last result is also given to the hydrochloric acid method. In this respect vanillin resembles the sugars.

*Vanillin, however, differs from the sugars and dihydroxyacetones in that the acid admixture so obtained gives a yellow precipitate or solution on diluting with water.

(Chapter IV continues in subsequent issue.)

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